



REPORT OF THE  
**Hydro-Electric Power**  
**Commission**  
OF ONTARIO  
**1931**

MR. WILLS MACLACHLAN

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*Will MacLachlan*



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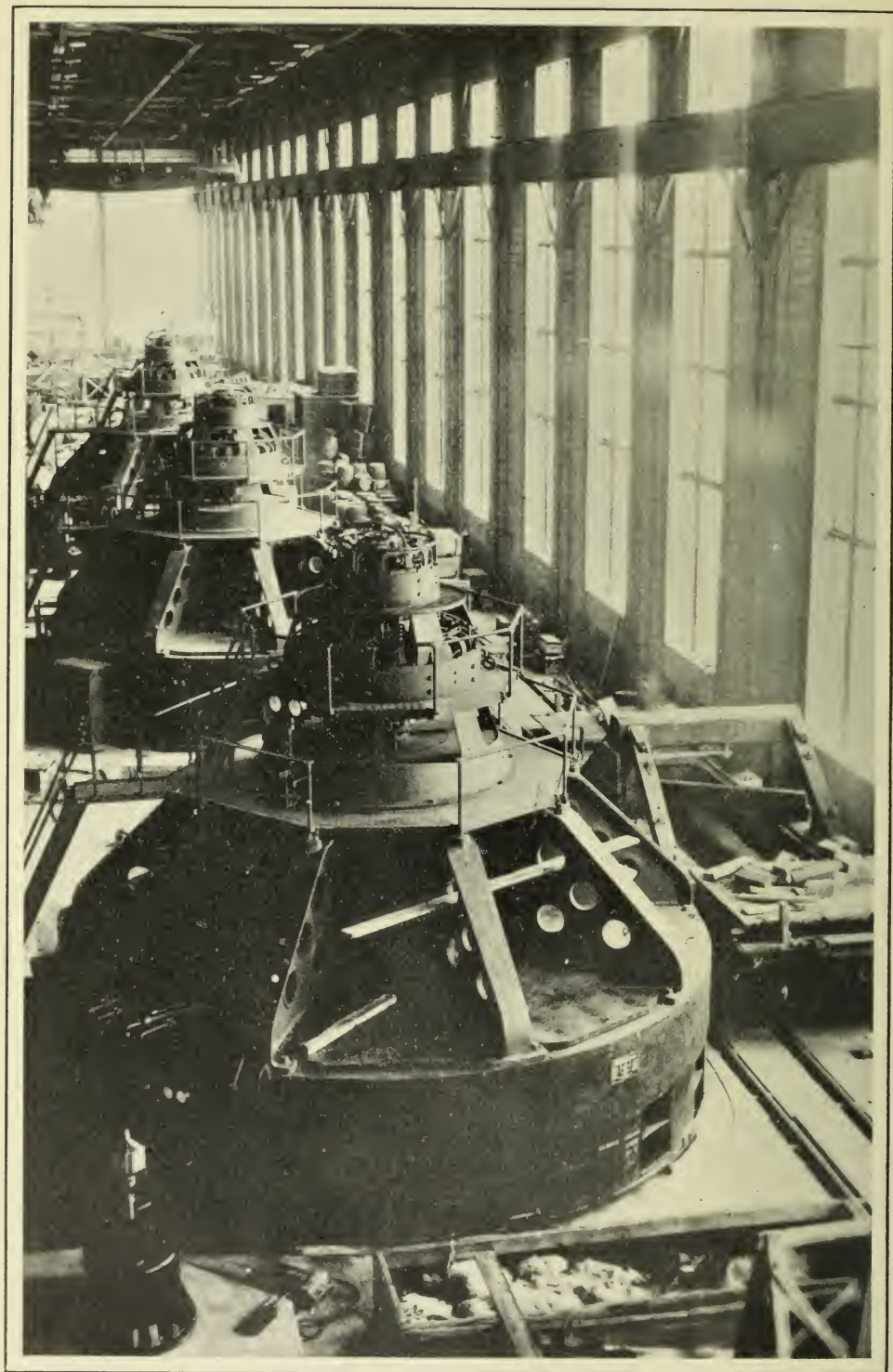




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CHATS FALLS POWER DEVELOPMENT—OTTAWA RIVER



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Commission  
(TWENTY-FOURTH) ANNUAL REPORT

OF THE

# HYDRO-ELECTRIC POWER COMMISSION

OF THE

PROVINCE OF ONTARIO

FOR THE YEAR ENDED OCTOBER 31st

1931

PRINTED BY ORDER OF  
THE LEGISLATIVE ASSEMBLY OF ONTARIO



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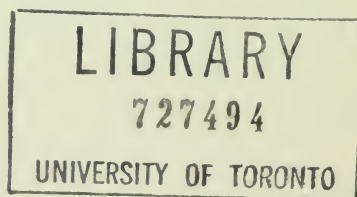
TORONTO

Printed and Published by Herbert H. Ball, Printer to the King's Most Excellent Majesty  
1932

THE  
HYDRO-ELECTRIC POWER COMMISSION  
OF ONTARIO

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HON. J. R. COOKE, M.L.A. .... *Chairman*  
C. ALFRED MAGUIRE. .... *Commissioner*  
RT. HON. ARTHUR MEIGHEN, P.C., K.C. .... *Commissioner*  
W. W. POPE. .... *Secretary*  
F. A. GABY, B.A.Sc., D.Sc. .... *Chief Engineer*



TO THE RIGHT HONOURABLE SIR WILLIAM MULOCK, K.C.M.G., P.C., C.J.O.,  
*Administrator of the Government of the Province of Ontario.*

MAY IT PLEASE YOUR HONOUR:

The undersigned has the honour to present to your Honour the Twenty-fourth Annual Report of The Hydro-Electric Power Commission of Ontario for the fiscal year ending October 31, 1931.

This Report covers all of the Commission's activities and also embodies the financial statements for the calendar year 1931, of the municipal electric utilities operating in conjunction with the various systems of the Commission and supplying electrical service to the citizens of the Province.

Dealing, as it does, with a multiplicity of activities relating to several electrical systems obtaining power from thirty-nine hydro-electrical developments operated by the Commission, supplemented by power purchased from other sources, and recording financial and other data relating to the individual local municipal electric utilities, the Annual Report presents a large amount of statistical information, much of which must, of necessity, be of a summary character.

The financial statements, the statistical data and the general information given, however, are so arranged and presented as to give a comprehensive survey of the Commission's operations. Not only does the Report record the progress made during the past year, but it gives, in addition, certain cumulative results for the various periods during which operation has been maintained in the respective municipalities.

At the end of the fiscal year the number of municipalities served in Ontario by the Commission was 721. This number included 27 cities, 93 towns, 263 villages and police villages and 338 townships. With the exception of 12 suburban sections of townships known as voted areas, the townships and 86 of the smaller villages are served as parts of 167 rural power districts.

#### **Constructional Activities**

The chief constructional activities of the Commission during 1931 comprised the completion to the initial operating stage of the Chats Falls development on the Ottawa river with its associated 220,000-volt step-up transformer station; the placing in service of the second and third units at Alexander power development which serves the Thunder Bay system; improvements and repairs at the

Big Chute plant on the Severn river, and at the South Falls plant on the South Muskoka river—two of the plants serving the Georgian Bay system; the building of one new bridge and the reconstruction of a portion of a second in connection with the Queenston-Chippawa development; the completion of work in connection with the concrete envelope around conduit No. 3 at the Ontario Power plant at Niagara; the construction on separate towers of a third circuit of the Hydro 220,000-volt transmission lines, to convey the power to be developed at Chats Falls; the construction of a new 132,000-volt transmission line, 189 miles long between Hunta and Sudbury in Northern Ontario; the addition of two transformer banks at Toronto-Leaside transformer station, also two transformer banks at Toronto-Bridgman transformer station; the completion of transformer stations in Hamilton and near Kingston; the construction of a number of smaller distributing stations on the several systems; the addition of transformer capacity to many transforming and distributing stations, and the construction of about 1,470 miles of primary lines in rural power districts.

The virtual completion of the hydraulic structures of the joint Chats Falls development of the Commission and the Ottawa Valley Power Company, within a period of little more than two years from the commencement of construction is an exceptional achievement. Favourable climatic and stream-flow conditions prevailed during the construction period and greatly facilitated the progress of the work. The ultimate capacity provided for is 280,000 horsepower of which 224,000 horsepower in eight units is at present being installed. The maximum head developed is 58 feet. The dam has a length at the crest line exceeding three miles, but nowhere is of great height. The power house straddles the inter-provincial boundary and half the generating units are placed on the Ontario side and half on the Quebec side. Descriptions of both the hydraulic and electrical features of the Chats Falls plant are given in the body of this report.

At Alexander power development on the Nipigon river, which was placed in operation last year, the second and third units were installed, bringing the capacity up to 54,000 horsepower. Headworks are installed for a fourth unit. The head developed at the site is 60 feet. A description of this development also is given in the body of this Report.

In the Abitibi district of Northern Ontario the Commission has constructed a two-circuit steel-tower transmission line 189 miles long to convey 25-cycle power purchased from the Ontario Power Service Corporation. The power is to be generated at the Abitibi Canyon on the Abitibi river and delivered to the Commission at Hunta some 55 miles from the plant. The Commission's line extends from Hunta, situated some 10 miles west of Cochrane, to Sudbury. The line is designed to operate at 132,000 volts and it is of interest to note that this voltage is the same as that employed in Great Britain for the inter-connecting transmission system there known as the "Grid." At present the line is being operated at 110,000 volts.

Throughout the various systems, changes and increases in transformer and switching equipment are constantly being made. The completion of a 15,000-kv-a. transformer station at Hamilton and the rapid design and construction of a 15,000-kv-a. transformer station at Kingston are worthy of mention. The latter station was needed at short notice to take care of the situation impending by reason of water shortage for the hydro-electric developments of central Ontario.



The consolidation of transmission networks and the tying in of large blocks of power to the Niagara system over long transmission lines brings special problems of an intricate technical character. Special devices are being installed at strategic points to minimize and localize any trouble developing.

The Commission, in connection with its several systems operates some thirty-nine hydro-electrical developments and is continually improving these as opportunity offers or as necessity arises in order to maintain the plants at the highest possible efficiency. During the past year special repairs were made to the power canal at the Big Chute plant on the Severn river, and at the South Falls development on the South Muskoka river a wood-stave penstock was replaced.

The Commission endeavours to have the surroundings of its various properties attractively laid out and maintained. In connection with the grading, etc., associated with this class of work, it has been able to give some relief to the unemployment situation in the Niagara and Eastern Ontario districts.

At Toronto-Leaside transformer station the addition of two 45,000-kv-a. transformer banks raises the capacity of the station to 270,000 kv-a. and virtually completes the installation necessary to receive the power contracted for from the Gatineau power company and the first years' output of power from the Chats Falls development. The construction of the Hydro 220,000-volt transmission lines, together with the receiving station at Leaside is a noteworthy achievement. It is the greatest undertaking of its kind in the British Empire, and in respect to climatic conditions to be provided for and the undeveloped territory traversed by about half the length of the line, is unprecedented anywhere in the world. The cost of the transmission lines and receiving stations now completed was substantially less than the estimates, thereby lowering the delivered cost of Gatineau power to the Niagara system by nearly \$1.00 per horsepower below what had been anticipated when the undertaking was projected. During the year the third circuit on independent towers has been added to convey power to the Niagara system from the new Chats Falls development and power was actually delivered during the last three months of 1931. The capacity of the receiving station at Leaside will be increased as required to handle additional power from this source.

### Operating Conditions

During the past year there have been no failures of moment either in station or line equipment, all of which has been maintained in its normal state of efficiency.

The output of many of the smaller hydro-electric generating plants has been curtailed because of the continued lack of rainfall. The deficiency has been particularly noticeable on the Georgian Bay and Eastern Ontario systems and on the Nipissing district where the load demand has remained at approximately the same high level as that established during the two previous years. On these systems the flow of some of the rivers dropped below any flows previously recorded by the Commission. Power shortages would have occurred if the danger had not been foreseen and arrangements, as undernoted, made in time to avert it.

On the Georgian Bay system, the Hanover frequency-changer set, which was placed in operation during the preceding year, enabled power to be transferred from the Niagara system to the Georgian Bay system in amounts sufficient to avert a shortage this year. In the Nipissing district a new transmission line from Sturgeon Falls was completed in January. For about two weeks prior to its completion some restrictions in the use of power were necessary, but thereafter the power from the generating plants of the Abitibi Power & Paper Co. made available by this line was sufficient to meet the shortage in effective generating capacity. On the Eastern Ontario system a new 110,000-volt transformer station was constructed near Kingston, enabling power demands to be met by taking additional 60-cycle power from the Gatineau Power Company at an earlier date than provided in the contract.

With the exceptions noted, there were no difficulties in meeting the demand for power.

### COST OF ELECTRICAL SERVICE FURNISHED BY THE COMMISSION

The function of the Commission is not only to use its best endeavours to provide for the people of Ontario an adequate and reliable supply of electrical energy, but also to ensure that the cost of that electrical energy to the consumers shall be the minimum consistent with the financial stability of the enterprise. The success that has been attained in the accomplishment of the latter object may be appreciated by a careful study of the actual rates to consumers as presented in Statement "E," and of the statistical data setting forth the results that have been attained for the consumers under these rates, as presented in Statement "D," in conjunction with the various financial statements of the Report.

### LOAD CONDITIONS

For some years it has been the custom to present at this place in the Annual Report a tabulation showing the coincident peak loads for each of the Commission's systems at the close of the year, as compared with corresponding data for the previous year. The figures that have been presented for the Niagara system in this table have included both the Canadian load and export power. In view of circumstances arising out of the prevailing abnormal economic conditions, the trend with respect to deliveries of power for Canadian use is, this year, more accurately shown by the peak loads exclusive of export power, which loads, in summary, are as follows:\*

	October 1930	December 1930	October 1931	December 1931
Niagara system (Canadian load only)....	818,526	841,400	756,032	775,180
Other systems, total.....	262,842	257,878	245,273	253,114
Grand total (Canadian loads only).....	<u>1,081,368</u>	<u>1,099,278</u>	<u>1,001,305</u>	<u>1,028,294</u>

The circumstances mentioned make it desirable also, before presenting the more extended table which corresponds to those appearing in previous Annual Reports, to refer to the influence which surplus power has exerted upon some of the totals for the past two years.

\*Loads and generating capacities must be construed with respect to operating conditions and circumstances. In addition to the comments here given, reference should be made to the general discussion in Section II, and to the graphs of the various systems—especially those for the Niagara system on pages 10 and 11.

### Utilization of Surplus Power

As explained in the Commission's Annual Report for 1928, in order to assure continuity of service it is necessary to maintain a margin between the total installed capacity and the anticipated peak load. In most electrical undertakings this reserve capacity, maintained to permit overhaul of units and to meet emergencies, is called upon only for a relatively few hours in the year. Furthermore, even on systems such as those of the Commission which have a high load factor, there are, of course, daily and seasonal peaks, and since the equipment provided must be capable of taking care of the maximum demand whenever it may occur, some additional equipment must be idle during "off-peak" periods, unless a market can be found for the surplus power at such times as it may be available.

In order to effect the maximum utilization of its equipment, the Commission consistently strives to encourage the most uniform use possible of power by its customers. Its ordinary rate schedules for power, for example, enable Ontario consumers using their power for the equivalent of more than about four hours per day to obtain all additional use at lower rates for the additional energy required—in many cities less than one-third of a cent per kilowatt-hour. Special classifications are available to power consumers able and willing to arrange their power demands in a manner that assists in a more economical operation of the Commission's plants, with rates depending upon the degree to which such power consumers are prepared to adjust their demands in order to benefit the system as a whole. Such adjustments agreed to be made by consumers in their demands, range from agreements to accord the Commission the right to interrupt the power during specified hours on specified days at specified times of the year, down to the type of contract under which the Commission is placed under no obligation whatever to supply power except as it may be available and mutually advantageous to the Commission and to the customer.

Power on such special terms, on account of the uncertainties and irregularities involved, is not useable by ordinary industrial consumers, although a limited amount of such power can be and is utilized by large special industries in certain heating, electro-chemical and electro-metallurgical processes. Especially is the market limited for the type of power—known as "at-will" power—under which the vendor assumes no obligation to supply the power except as it may be available after precedence has been accorded to all other demands upon its equipment. With regard to this type of power as well as to all other types of power, the interests of Canadian consumers are given priority of consideration, but the chief market for "at-will" power is in adjacent territory served by power supply systems securing at least a large proportion of their power from steam plants. By utilizing when available this "at-will" power, such systems can, for example, reduce their expenditures for fuel.

The Commission for several years past has been able to reduce greatly the idle time of its generating units at Niagara by disposing of quantities of its surplus power to the Canadian Niagara Power Company for use in the United States under arrangements that permit of its withdrawal *at any time* when required either on account of operating emergencies or for use by Canadian industry. The sale of this power has resulted in a substantial additional revenue to the



Niagara system of the Commission. The extra revenue secured involves but little additional operating cost, and therefore reduces the cost of power to Ontario municipalities.

In October and December, 1930, it happened that at the time of the coincident peak loads on the Niagara system no contingencies arose requiring the employment of the margin of surplus capacity, and the Commission, being able to dispose of this surplus power on an "at-will" basis, created peak loads for these months higher than would otherwise have been the case. In 1931, however, due to lessened industrial activity there was a substantial curtailment in the market for surplus power, and this is reflected in the figures for October and December, 1931, in the table.

It will be appreciated, therefore, that the foregoing considerations must be kept in mind for a correct interpretation of the following tabulation which shows the power supplied to the various systems at the close of the year, including, in the case of the Niagara system and of the grand total, export power as well as power for Canadian use.\*

#### DISTRIBUTION OF POWER TO SYSTEMS

##### 20-MINUTE PEAK HORSEPOWER SYSTEM COINCIDENT PEAKS

System	October 1930	December 1930	October 1931	December 1931
Niagara system.....	1,000,670	1,028,400	805,630	828,200
Dominion Power and Transmission System.....	58,579	61,528	48,659	56,166
Georgian Bay system.....	23,355	25,591	26,356	27,531
Eastern Ontario system†.....	88,678	93,560	85,857	91,253
Thunder Bay system.....	73,968	61,300	51,600	50,300
Northern Ontario system:				
Sudbury district.....	12,935	10,724	27,200	21,850
Nipissing district.....	3,745	3,654	3,689	4,088
Patricia district.....	1,582	1,521	1,912	1,926
Totals.....	<u>1,263,512</u>	<u>1,286,278</u>	<u>1,050,903</u>	<u>1,081,314</u>

The load conditions in the several systems are of special interest this year because of the variations from the usual load trend, as shown in the Operating section of this Report.

Notwithstanding the prevailing industrial depression, slight increases have occurred in the peak loads for some systems, but on the whole there has been a decrease in the total number of kilowatt-hours used.

Nearly all of this decrease in the kilowatt-hours can be attributed to the lessened demands of certain large chemical and industrial plants which have been particularly affected by the business depression. Omitting some of these large industrial loads in the vicinity of Niagara Falls and in the Thunder Bay system, the decrease in the kilowatt-hours used in the rest of the Province is only one-third of one per cent. The peak load in 1931, with these omissions shows a slight increase over 1930.

\*See footnote on page viii.

†Eastern Ontario system includes Central Ontario, St. Lawrence, Rideau, Ottawa and Madawaska districts.



Due to the reduced demands of the large chemical, pulp and other industrial plants just referred to, the Niagara and Thunder Bay systems show the largest decreases in load. In this connection it is important to recognize that decreases in actual delivery of power to a system do not imply proportionate decreases in sales of power, or in revenue. The sale of electric power is to a certain degree analogous to a leasing of generating facilities rather than to the sale of a commodity, and thus just as rentals of leased property continue even though the property may be only partially utilized by the tenant, so the power sold under contract continues to bring in revenue even though not fully utilized. In the Niagara and Thunder Bay systems the power paid for by certain industries exceeded their actual peak loads by an aggregate of about 90,000 horsepower. Consequently, with respect to sales of power and revenues therefrom, the results for the year 1931 are more favourable than might be inferred from consideration of actual deliveries of power as represented by statistics of the peak loads of the systems

The Georgian Bay system shows an increase in both peak load and kilowatt-hours. The loads in the various municipalities and districts of the Eastern Ontario and Northern Ontario systems showed both increases and decreases, but on the whole remained about the same as during the previous year.

Load conditions may be summed up by stating that there has been a marked decrease in the load of a few large industrial plants, but that except for these plants the consumption of power throughout the Province including that used for domestic and manufacturing purposes has remained at approximately the same level as during the preceding year.

#### FINANCIAL SUMMARIES

It will be observed that the financial statements embodied in this Report are presented in two main divisions, namely, a division—Section IX—which deals chiefly with the operations of the Commission in the generation, transformation and transmission of electrical energy to the co-operating municipalities; and a division—Section X—which deals with the various operations of the municipal electric utilities in the localized distribution of electrical energy to consumers. In Section IX, "Rural Operating" reports are also given, which summarize the results of the local distribution of rural electrical service by the Commission to the individual consumers in rural power districts. This work is performed by the Commission on behalf of the respective townships co-operating to provide rural service.

The cumulative results of the operation of the several systems of the Commission as set forth in this Report demonstrate a sound financial condition.

The total investment of the Hydro-Electric Power Commission of Ontario in power undertakings and hydro-electric railways is \$267,575,539.68, exclusive of government grants in respect of construction of rural power districts' lines; and the investment of the municipalities in distributing systems and other assets

is \$105,434,582.32, making in power and hydro-electric railway undertakings a total investment of \$373,010,122.00.

# CAPITAL INVESTMENT

The following statement shows the capital invested in the respective systems and municipal undertakings:

Niagara system.....	\$182,176,761.94
Undertakings and Companies acquired from the Dominion Power and Transmission Co.....	21,489,434.83
Chats Falls development.....	4,835,702.51
Georgian Bay system.....	8,203,445.46
Eastern Ontario system (including Nipissing district).....	21,570,767.11
Thunder Bay system.....	18,406,363.39
Northern Ontario system (Sudbury, Abitibi, and Patricia districts).....	5,259,255.71
Hydro-Electric railways.....	1,897,838.32
Office and service buildings, construction plant, inventories, etc.....	3,735,970.41
	<u>\$267,575,539.68</u>
Municipalities distributing systems and other assets (exclusive of \$20,103,275.76 of municipal sinking fund equity in H.E.P.C. system)—all systems.....	105,434,582.32
	<u><u>\$373,010,122.00</u></u>

# REVENUE OF COMMISSION

The Commission collected from the municipal utilities and other customers, a total sum of \$27,908,153.95. This sum was appropriated to meet all the necessary fixed charges and to provide for the expenses of operation and administration. After meeting all charges there was left a net surplus of \$658,751.64.

The following statement summarizes the Commission's collections from municipal electric utilities and other power customers for the year and shows how the collections have been appropriated:

Revenue from municipal electric utilities and other power customers.....	\$27,908,153.95
Appropriated as follows:	
Operation, maintenance, administration, interest and other current expenses.....	\$22,093,507.05
Reserves for sinking fund, renewals, contingencies and obsolescence provided in the year.....	5,155,895.26
	<u>27,249,402.31</u>
Net surplus credited to municipalities under cost contracts.....	<u><u>\$658,751.64</u></u>

NOTE.—The above figures do not include the revenue from the operation of the undertakings and companies which were acquired by the Commission from the Dominion Power and Transmission Company, Limited, as from January 1st, 1930. From this date the Commission has continued the operation thereof under the various company franchises, and a separate revenue and expense statement is shown for these.

## RURAL ELECTRICAL SERVICE

During the past few years very substantial progress has been made in Ontario in the field of rural electrification. Practically all rural electrical service is now given through rural power districts which are operated directly by the Commission. There is now rather more than \$15,507,000 invested in the rural power district systems established by the Commission. Towards this rural work the Ontario Government, pursuant to its policy of promoting the basic industry of agriculture, has, in the form of grants-in-aid, contributed 50 per cent of the costs of transmission lines and equipment, or some \$7,677,000. A total of 8,197 miles of transmission lines have been constructed to date, of which 1,470 miles were constructed during the past year. There are now more than 55,000 customers supplied in the rural power districts.

## RURAL POWER DISTRICTS—OPERATIONS FOR THE YEAR 1931

	Niagara system	Georgian Bay system	Eastern Ontario system	Totals
	\$ c.	\$ c.	\$ c.	\$ c.
Cost of power as provided to be paid under Power Commission Act.....	713,359.34	78,587.02	147,973.41	939,919.77
Cost of operation, maintenance and adminis- tration.....	460,488.04	37,936.44	102,331.89	600,756.37
Interest.....	232,017.53	23,837.08	57,205.62	313,060.23
Renewals.....	208,799.24	20,126.72	48,946.74	277,872.70
Obsolescence and contingencies.....	104,399.62	20,126.72	24,473.37	148,999.71
Sinking fund.....	55,496.81	5,584.70	13,101.69	74,183.20
Total expenses.....	1,774,560.58	186,198.68	394,032.72	2,354,791.98
Revenue from customers.....	1,888,536.58	170,968.00	397,484.65	2,456,989.23
Net surplus, all districts.....	113,976.00	.....	3,451.93	117,427.93
Net deficit, all districts.....	.....	15,230.68	.....	15,230.68
Net surplus, all systems.....	.....	.....	.....	102,197.25

## MUNICIPAL ELECTRIC UTILITIES

The following is a summation of the year's operation of the local electric utilities conducted by municipalities receiving power under cost contracts with the Commission:

Total revenue collected by the municipal electric utilities.....	\$31,657,564.88
Cost of power.....	\$18,402,304.24
Operation, maintenance and administration.....	5,698,056.49
Debenture charges and interest.....	4,569,568.79
Depreciation and other reserves.....	1,793,111.69
Total.....	30,470,041.21
Surplus.....	\$1,187,523.67



## RESERVES OF COMMISSION AND MUNICIPAL ELECTRIC UTILITIES

The total reserves of the Commission and the municipal electric utilities for sinking fund, renewals, contingencies and insurance purposes amount to \$115,639,726.38 made up as follows:

Niagara system.....	\$48,503,212.29
Georgian Bay system.....	2,197,526.09
Eastern Ontario system.....	4,865,154.23
Thunder Bay system.....	2,597,316.84
Northern Ontario system—Sudbury and Patricia districts.....	86,941.78
Service building and equipment.....	616,737.10
Hydro-Electric railways (Guelph).....	98,728.80
Insurance, workmen's compensation and staff pensions.....	3,438,794.76
Total reserves of the Commission.....	\$62,404,411.89
Total reserves of municipal electric utilities.....	53,235,314.49
Total Commission and municipal reserves.....	<u>\$115,639,726.38</u>

The consolidated balance sheet of the municipal electric utilities, on page 270, shows a total cash balance of \$2,738,319.67, and bonds and other investments of \$1,999,846.42. The total surplus in the municipal books now amounts to \$37,794,134.98 in addition to depreciation and sundry other reserves aggregating \$15,441,179.51.

The following is a brief summary of the principal operations relating to the several systems of the Commission:

## NIAGARA SYSTEM

The Niagara system embraces all territory lying between Niagara Falls, Hamilton and Toronto on the east and Windsor, Sarnia and Goderich on the west served with electrical energy generated at plants on the Niagara river, supplemented with purchased power transmitted from plants on the Gatineau river and the Ottawa river. A few municipalities and districts of the Niagara system are served also with power developed at Decew Falls.

Power as supplied to the Commission by the Gatineau Power Company is received by the Commission at the interprovincial boundary on the Ottawa river and is transmitted over two 220,000-volt steel-tower transmission lines to Leaside. Power obtained from Chats Falls development on the Ottawa river, which plant is being constructed jointly by the Commission and the Ottawa Valley Power Company, formerly the Chats Falls Power Company, is transmitted from Chats Falls to Leaside over a third 220,000-volt steel-tower line, which was completed and put into operation during the year.

Arrangements have already been made for additional power for this system, which should be adequate for a number of years ahead. In addition to power contracted for with the Gatineau Power Company and additional power to be obtained from the development at Chats Falls, which will provide the Commission with 216,000 horsepower, the Commission has arranged to purchase additional power, amounting to 250,000 horsepower, to be developed on the St. Lawrence river by the Beauharnois Light, Heat & Power Company, and



125,000 horsepower to be delivered to the Commission as required from a plant on the Lièvre river under a contract with the James MacLaren Company Limited, subsequently assigned to a subsidiary power company known as MacLaren-Quebec Power Company.

Since the purchase of the undertakings and companies of the Dominion Power & Transmission Company Limited, the operation of these properties has been continued by the same staff but under revised supervision. An agreement was entered into with the Hamilton Hydro-Electric System by which the Commission sold to the city of Hamilton the distribution system, substations and other properties in the city.

Negotiations are proceeding in connection with the taking over by the cities of Brantford and St. Catharines of subsidiary companies in these cities on the same basis as Hamilton.

The total capital invested by the Commission on behalf of the co-operating municipalities of the Niagara system is \$182,176,761.94, and the accumulated reserves for renewals, obsolescence, contingencies and sinking fund, aggregate \$48,503,212.29. This is exclusive of the undertakings and companies purchased from the Dominion Power and Transmission Company, Limited, for which separate statements of assets and liabilities, and operations are presented.

From the rural power districts of this system, which are directly operated by the Commission, the revenue received for the year from customers was \$1,888,536.58, and the total cost of supplying the service was \$1,774,560.58, leaving a balance of \$113,976.00, which is placed to the credit of districts in this system.

With respect to the electric utilities of the various urban municipalities of the Niagara system, the actual cost of power supplied by the Commission during the year was \$647,413.52 less than the total amount collected at the interim rates, and this sum has been credited to the Municipal Utilities. The total revenue of the municipal electric utilities served by this system was \$26,275,001.25, an increase of \$1,443,832.54.

The total net surplus for the year from the operation of the various municipal electric utilities was \$830,967.09, after providing \$1,524,420.75 for depreciation and other reserves and \$1,885,361.96 for the retirement of instalment and sinking fund debentures. Forty-one municipal utilities had deficits upon the year's operations, aggregating \$42,003.20, whereas the total combined surplus of the other municipal electric utilities served by this system was \$872,970.29.

#### GEORGIAN BAY SYSTEM

The Georgian Bay system serves the area adjacent to Georgian Bay including the counties of Bruce, Grey, Dufferin and Simcoe and the northern portions of the counties of Huron, Wellington and Ontario, as well as a large portion of the district of Muskoka.

The main supply of electrical energy for the district is obtained from eight hydro-electric developments, three situated on the south branch of the Muskoka river, two on the Muskoka river at Bala, two on the Severn river, and one on the Beaver river, supplemented by power from the Niagara system obtained

through two frequency-changer stations at Mount Forest and Hanover. Power is also obtained for secondary purposes from small developments at Hanover, Walkerton and Southampton, the combined capacity of which approximates 1,300 horsepower.

During the year the properties acquired in Bruce county from The Public Utilities Consolidated Corporation, a subsidiary of The W. B. Foshay Company of Minneapolis, namely The Walkerton Electric Light & Power Company, and The Saugeen Electric Light & Power Company, were consolidated with the Georgian Bay system and the distribution systems in four of the principal towns were purchased by the municipalities and placed under local management after by-laws had been passed by the ratepayers, and agreements entered into with the Commission.

Contracts for a supply of power were executed with the municipalities of Port Elgin, Southampton, Walkerton, Wiarton and Rosseau.

Although there was in the Georgian Bay system a small decrease in the demand for power in the urban centres, the difference was more than made up by an increase in the demand in the rural districts caused by extensions to existing districts and establishment of new districts. This increase, together with the demands of the new municipalities served in Bruce county, has resulted in a total peak load, approximately 1,200 horsepower in excess of that for the previous year.

The total capital invested by the Commission on behalf of the co-operating municipalities of the Georgian Bay system is \$8,203,445.46, and the accumulated reserves for renewals, obsolescence, contingencies, and sinking fund aggregate \$2,197,526.09.

The revenue received for the year from customers in rural power districts of this system which are directly operated by the Commission was \$170,968.00, and the total cost of supplying service was \$186,198.68, leaving a balance of \$15,230.68, which has been charged to districts in this system.

With respect to the electric utilities of the various urban municipalities of the Georgian Bay system, the actual cost of power supplied by the Commission for the year was \$47,371.33 in excess of the revenue from the interim monthly billing. This sum has been charged to the municipalities operating under cost contracts. The total revenue of the municipal electric utilities served by this system was \$1,115,202.82, an increase of \$64,101.28 over the previous year.

After charging \$62,450.70 for depreciation reserve and \$58,994.83 for the retirement of instalment and sinking fund debentures, the net shortage from the operation of the various municipal electrical utilities was \$40,777.97.

#### EASTERN ONTARIO SYSTEM

This system serves all of Ontario east of the areas comprising the Georgian Bay and Niagara systems. It includes the following districts: Central Ontario, St. Lawrence, Rideau, Ottawa and Madawaska.

The sources of power for the Eastern Ontario system comprise developments owned by the Commission on the Trent canal system and on the Mississippi

and Madawaska rivers, and purchased supplies from the Cedar Rapids Power Company, the Gatineau Power Company, the Rideau Power Company, the Corporation of Campbellford and Beach Estate at Iroquois.

During the year, the voltage of the transmission line from Smiths Falls to Kingston, over which the power purchased from the Gatineau Power Company is supplied, was increased from 44,000 volts to 110,000 volts and a new transformer station erected at Kingston. This required alterations to the station at Forfar to transform from 110,000 volts to 8,000 volts for the Smiths Falls rural power district.

The Commission sold the local distribution systems in Tweed, Deseronto and Bowmanville to the municipalities, on the basis of the value of these systems as recorded in the books of the Commission. Each municipality was credited with the accumulated renewals reserves set up in respect of the properties purchased by it. These municipalities submitted by-laws to the ratepayers and entered into agreements for the supply of power from the Commission.

The villages of Bath and Westport also signed agreements for the purchase of power from the Commission and lines are being constructed to supply these municipalities.

The load requirements of the system did not increase as much as was anticipated over the previous year, but owing to a deficiency of precipitation and resulting low water on the Trent Canal system and other rivers on which the Commission's generating plants are situated, it was necessary to call on the Gatineau Power Company for the annual increment of 6,000 horsepower in September, which normally is provided under the term of the contract on October 1st of each year, and arrangements were made to obtain additional power temporarily from the Cedar Rapids Power Company for the St. Lawrence district. All demands for power for the requirements of the system were thus met and the Commission's future needs for the system are amply provided by the existing contract for purchased power.

The total capital invested by the Commission on behalf of the co-operating municipalities of the Eastern Ontario system is \$21,570,767.11, and the accumulated reserves for renewals, obsolescence, contingencies and sinking fund aggregate \$4,865,154.23.

In the rural power districts of this system, which are directly operated by the Commission, the revenue received for the year from customers was \$397,484.65, and the total cost of supplying the service was \$394,032.72, leaving a balance of \$3,451.93, which is placed to the credit of districts in this system.

With respect to the electric utilities of the various urban municipalities of the Eastern Ontario system operating under cost contracts the actual cost of power supplied by the Commission during the year was \$15,243.53 less than the total amount collected at the interim rates and this has been credited to the municipal utilities. The total revenue of the municipal electric utilities served by this system was \$2,883,777.62, a decrease of \$3,357.83.

The total net surplus for the year from the operation of the various municipal electric utilities was \$282,598.13, after providing \$167,988.00 for depreciation and other reserves and \$115,336.41 for the retirement of instalment and sinking fund debentures. Five municipal utilities had small deficits upon the year's operations, aggregating \$1,390.55, whereas the total combined surplus of the other electric utilities served by this system was \$283,988.68.



## THUNDER BAY SYSTEM

The Thunder Bay system serves that part of the Thunder Bay district lying between Lake Nipigon and the international boundary, including the cities of Fort William and Port Arthur, and the village of Nipigon. The greater portion of the developed power is utilized by grain elevators and pulp and paper mills, and due to the world-wide depression which has largely affected the power demands of these two major industries, the load on this system has fallen off considerably. However, taking account of the good financial history of this system there is every reason to believe that it will continue to operate with an excellent showing as in previous years.

The Commission has, in the Thunder Bay system, a total investment of \$18,406,363.39, and accumulated reserves for renewals, contingencies, and sinking fund aggregate \$2,597,316.84.

The actual cost of power supplied to this system by the Commission for the year was \$44,814.76 in excess of revenue from the interim monthly billing, which sum has been charged to the municipalities operating under cost contracts. The total revenue of the municipal electric utilities in this system was \$1,383,583.19. The three municipalities served by this system operated with a net surplus of \$114,736.42 after providing depreciation to the extent of \$38,252.24 and \$21,655.10 for the retirement of debentures.

## NORTHERN ONTARIO SYSTEM

This system covers all of the Province north of the French river and lake Nipissing except the territory served by the Thunder Bay system. Certain areas of the Northern Ontario system are served by separate developments, and engineering assistance and advice covering management and operation are given by the Commission to all municipalities and unorganized sections of the area when requested. The principal active sections at the present time are the Nipissing district, the Sudbury district, the Abitibi district, and the Patricia district.

## NIPISSING DISTRICT

This district comprises the area adjacent to the eastern shores of lake Nipissing; the municipalities served include the city of North Bay, the villages of Callander and Powassan, and the townships of Ferris, Himsworth and Nipissing. Power is obtained from three hydro-electric developments on the South river, namely, Nipissing, Bingham Chute, and Elliott Chute. Owing to low water conditions in this district, due to lack of precipitation, arrangements were made with the Abitibi Power and Paper Company for an emergency supply of power from its development at Crystal Falls (formerly known as Smoky Falls) on the Sturgeon river and a transmission line was constructed and placed in operation between North Bay and Sturgeon Falls. For purpose of financial administration the Nipissing district of the Northern Ontario system is associated with the districts of the Eastern Ontario system.

## SUDBURY DISTRICT

The active area in this district lies in and adjacent to the city of Sudbury, including the mining area known as Sudbury Basin, the source of power supply being the three developments recently purchased from The Wahnapiatae Power Company. The load at Sudbury and the adjacent district, although not as large as when mining operations are normal, has continued fairly steady throughout the year, with the result that the financial operations for the district have been satisfactory.

## ABITIBI DISTRICT

The active area in this district comprises the territory within transmission distance on both sides of a transmission line constructed during the year from Hunta just west of Cochrane to Copper Cliff. Power is obtained under a contract entered into by the Commission with The Ontario Power Service Corporation, Limited. This line was placed in service on October 5th and the Commission is prepared to deliver the block of power now under contract with The International Nickel Company.

## PATRICIA DISTRICT

The active section in this district is the Red Lake mining area. Power is developed at Ear Falls at the foot of Lac Seul, and supplied to one of the leading gold mines in the district. The Commission is prepared to supply all power demands in the district within transmission distance of this development.

## THE ANNUAL REPORT

The Table of Contents, pages xxv and xxvi, conveys a good understanding of the scope of the matters dealt with in the Report, to which there is also a comprehensive Index. To those not conversant with the Commission's Reports the following notes will be useful.

In Section II, pages 6 to 59, dealing with the Operation of the Systems, are a number of interesting diagrams showing, graphically, the monthly loads on the various systems. Tables are also presented showing the amounts of power taken by the various municipalities in October during the past three years.

The rural distribution work of the Commission has proved of widespread interest and special reference to this is made in Section III, on pages 67 to 85. The power distributed to rural districts is, and possibly must always be, but a relatively small proportion of the power distributed by the Commission. The supplying of electrical service in rural areas, and especially on the farm, has, however, been of great economic benefit to Ontario. The Provincial Government grants-in-aid to this work have been of value to agricultural activities, and have assisted the Commission to extend rural transmission lines to many areas.

In Sections IV, V and VI will be found information respecting progress of work on new power developments and on transmission system extensions, together with photographic illustrations.



About one-half of the Report is devoted to statistical, financial data which are presented in two Sections, IX and X.

Section IX presents in summary form the financial statements relating to the operations of the Commission chiefly in the generation, transformation and transmission of electrical energy to the co-operating municipalities. It is introduced by an important explanatory statement which appears on pages 143 to 147, to which special reference should be made.

Section X presents in summary form the financial statements relating to the operations of the municipalities in the localized distribution of electrical energy to consumers. It also contains details of the costs of electrical energy to consumers in the various municipalities and tabular statements of the rates in force which have produced these costs. An explanation of the various tables and statements is given at the commencement of this Section on pages 263 to 265; and a special introduction to Statement "D," which relates to the cost of electrical service in Ontario, together with a diagram, appears on pages 382 to 385.

In its Annual Reports the Commission aims to present a comprehensive statement respecting the activities of the whole undertaking under its administration. Explanatory statements descriptive of the operations of the Commission in various branches of its work are suitably placed throughout the Report in order that the citizens of the Province may be kept fully informed upon the working-out of the Commission's policies.

The Commission receives many letters asking for general information respecting its activities, as well as requests for specific information concerning certain phases of its operations. In most cases these enquiries can satisfactorily be answered by simply directing attention to information presented in the Annual Report of the Commission. Real benefit would result to the "Hydro" undertaking if those who are commenting upon aspects of the Commission's work would first make sure by consulting the Commission's publications that the data upon which their comments are to be based are adequate and pertinent to the subject in hand. By such a course much misrepresentation, as well as inconvenience, would be avoided.

#### **Other Publications by the Commission**

From time to time, as considered desirable in the interests of the co-operating municipalities, the Commission has published, in addition to its Annual Report, pamphlets and special statements dealing with various matters of interest. Thus, at the close of the past year there was in course of preparation a pamphlet which has since been issued, entitled: "Rural Electrical Service in Ontario: A Statement Outlining Its Relationship to Electrical Service in Cities and Towns and Correcting Some Misunderstandings." This pamphlet deals with important facts concerning the rural work of the Commission, explains the relationship of electrical service in the rural power districts of Ontario to that given in cities and towns and clears up certain misunderstandings respecting rural electrical service and the cost of such service to consumers.

In connection with public statements made by the Commission, it is a pleasure to record that, as matters of public interest, the Press has given generously of services and space in order to convey to the citizens of Ontario information respecting their "Hydro" undertaking. For this the Commission desires to express its gratitude.

### The Present Situation

In closing this introductory statement it will be profitable to refer briefly to the present economic situation and its influence upon the "Hydro" undertaking; and while one is reluctant to keep referring to the existing depression, yet its pronounced character and the extended period over which it has prevailed have, to a greater or lesser degree, affected practically all electrical supply undertakings and the "Hydro" undertaking has not escaped.

In the foregoing review the load conditions have been referred to rather more fully than usual, and under the circumstances it is a satisfaction to be able to state that, compared with many similar undertakings, the "Hydro" enterprise has maintained its load at a relatively favourable level; its revenues and the revenues of the associated municipalities have to a noteworthy degree also been maintained, and the reserves of the undertaking have continued to increase substantially. However, while the load supplied to the municipalities has been well maintained, certain large industries directly supplied by the Commission are not using all of the power contracted for; and, furthermore, there has been a suspension of growth in the load for which the Commission—conservatively basing its estimate upon past experience—had made provision. On the other hand, the Commission at the commencement of the period of depression, had practically no margin between its available supplies and the actual demands. For a year or more following, the Commission, with its provisions for power supplies, was merely building up a reasonable reserve in relation to the power actually in use. Again, a substantial part of the existing margin of capacity represents power sold under contract, for which the Commission is being compensated, and which it is under obligation to hold as a reserve, immediately available when called for.

It is recognized as an essential in electricity supply undertakings to maintain over and above the estimated maximum load, a surplus of capacity sufficient to ensure uninterrupted service in the event of damage to equipment, or temporary reduction in effective capacity due to ice difficulties, unusual variations in rainfall or other contingencies; to enable units to be taken out of service for regular maintenance work and repairs; to provide a margin for unpredictable variations in peak loads due to exceptional over-lapping of the demands of different consumers; and to provide a margin for additional demands resulting from increased industrial activities or other causes. This reserve capacity, as ordinarily maintained by large systems, ranges from 10 per cent to as high as 30 per cent or more, of the normal operating capacity.

### A Broader Outlook Necessary

The whole question of provision for future demands, however, has to be dealt with by the Commission in a broad and comprehensive manner. As a basis for estimating future demands, special reliance must be placed upon past records of growth in load extending over a reasonable period which includes years of prosperity and years of decreased activity. In this connection it must be recognized that in modern communities there is a steady growth in demand for electrical service, due to growth in population and to an increase in individual consumption, which growth in demand goes on to a greater or lesser degree irrespective of the cyclical phenomena of prosperity and depression. This growth is, however, partially or entirely obscured during periods of depression by reason of a recession in the demand for power for industrial purposes.

Bearing the foregoing considerations in mind, it must also be appreciated that only large hydro-electric developments are capable of providing adequate additional supplies of power for an electrical undertaking of the magnitude of the Niagara system of the Commission. Such large developments take years to plan and construct. It is, therefore, necessary to plan several years ahead for the anticipated growth in demand. It is of the utmost importance that the general economic and industrial growth of Ontario should not be hampered by shortage of power supplies. If, after provisions have been made for increased power supply there should, in the interim, come, in the cycle of economic events, a period of depression with its lessened demands for power, it simply means that during a continuance of the depression there will be an increasing margin between the aggregate supplies of power being made available, and the actual demands. This is a quite natural phenomenon and one which need occasion no undue concern, because past experience has always shown that the power supplies made available are taken up and utilized at a rapid rate quite early in the turn of the cycle towards more normal social and economic conditions.

The Commission, with a recognition of the bountiful natural resources of the Province and with an assured faith in the ability of the citizens of Ontario to weather the present period of distress, goes forward into the coming year confident that the future will justify its course in providing for the citizens of Ontario ample supplies of power, and hopeful for an early return to more favourable economic conditions.

Respectfully submitted,

J. R. COOKE  
*Chairman*

TORONTO, ONTARIO, March 31st, 1932.

HON. J. R. COOKE, M.L.A.,

*Chairman, The Hydro-Electric Power Commission of Ontario,  
Toronto, Ontario.*

SIR,—I have the honour to transmit herewith the Twenty-fourth Annual Report of The Hydro-Electric Power Commission of Ontario for the fiscal year ended October 31st, 1931.

I have the honour to be,

Sir,

Your obedient servant,

W. W. POPE

*Secretary.*





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# TWENTY-FOURTH ANNUAL REPORT OF THE Hydro-Electric Power Commission of Ontario

## SECTION I

### LEGAL

At the 1931 Session of the Legislative Assembly of the Province of Ontario, two Acts relating to the work of the Hydro-Electric Power Commission of Ontario were passed. These are reproduced in full in Appendix I to this report. The short titles to the said Acts are as follows:

The Power Commission Act, 1931, Chapter 13.  
The Guelph Railway Act, 1931, Chapter 14.

The agreements between the Hydro-Electric Power Commission of Ontario and the municipalities and corporations mentioned in the list hereunder given were approved by Order-in-Council dated the 8th day of January, 1932.

CITY		TOWNSHIPS	
Oshawa.....	Aug. 4, 1931	Adolphustown.....	Jan. 12, 1931
		Ameliasburg.....	Oct. 15, 1930
TOWNS		Ancaster.....	June 30, 1930
Deseronto.....	Jan. 21, 1931	Athol.....	April 28, 1931
Southampton.....	Feb. 1, 1931	Bathurst.....	Oct. 20, 1931
Walkerton.....	Jan. 21, 1931	Bexley.....	Jan. 12, 1931
Walkerton.....	Jan. 31, 1931	Bexley.....	Aug. 17, 1931
Warton.....	Jan. 26, 1931	Brunel.....	Feb. 9, 1931
Warton.....	Mar. 1, 1931	Burgess North.....	Sept. 14, 1931
VILLAGES		Caledonia.....	June 15, 1931
Bath.....	July 6, 1931	Camden East.....	Nov. 11, 1930
Hastings.....	May 28, 1930	Camden East.....	Nov. 11, 1930
Long Branch.....	Dec. 31, 1930	Canborough.....	Oct. 20, 1931
Port Elgin.....	Feb. 28, 1931	Chaffey.....	Mar. 17, 1931
Port Elgin.....	Mar. 1, 1931	Clarence.....	July 6, 1931
Rosseau.....	Mar. 2, 1931	Cumberland.....	July 6, 1931
Tweed.....	Jan. 20, 1931	East Garafraxa.....	May 30, 1931
Westport.....	June 22, 1931	Elmsley North.....	May 5, 1931
		Elmsley South.....	May 1, 1931

## TOWNSHIPS—Continued

Erin.....	Aug. 25, 1930	Paipooenge.....	Oct. 10, 1931
Erin.....	May 26, 1931	Pakenham.....	Dec. 15, 1930
Ernestown.....	June 29, 1931	Ramsay.....	Oct. 9, 1931
Euphrasia.....	July 10, 1931	Rawdon.....	Nov. 14, 1930
Franklin.....	Mar. 3, 1931	Saugeen.....	July 15, 1931
Harvey.....	Mar. 7, 1931	Seneca.....	Aug. 17, 1931
Hawkesbury East.....	Sept. 2, 1931	Sheffield.....	Nov. 3, 1930
Hillier.....	Aug. 18, 1930	Sherbourne.....	Sept. 26, 1931
Himsworth South.....	May 30, 1931	Shuniah.....	Sept. 21, 1931
Hinchinbrooke.....	July 27, 1931	Somerville.....	Jan. 12, 1931
Hungerford.....	Oct. 30, 1930	Somerville.....	Sept. 5, 1931
Huntley.....	Nov. 3, 1930	South Fredericksburg.....	Nov. 3, 1930
Kingston.....	Sept. 8, 1930	South Gower.....	Jan. 12, 1931
Kitley.....	Sept. 10, 1931	South Monaghan.....	Mar. 2, 1931
Laxton, Digby & Longford.....	Jan. 12, 1931	Sydenham.....	Aug. 4, 1931
Lobo.....	Sept. 20, 1930	Thorah.....	July 11, 1931
Loughboro.....	Nov. 3, 1930	Tilbury North.....	Sept. 15, 1930
Macaulay.....	May 29, 1931	Tyendinaga.....	Aug. 5, 1931
Manvers.....	Nov. 3, 1930	Watt.....	Oct. 6, 1930
McLean.....	Sept. 18, 1931	West Garafraxa.....	Aug. 22, 1931
Mountain.....	Nov. 4, 1930	West Luther.....	Oct. 27, 1930
Oliver.....	Oct. 9, 1931	Widdifield.....	July 18, 1931
Ops.....	Oct. 18, 1930	Wolford.....	Sept. 5, 1930
Oxford-on-Rideau.....	July 27, 1931		

## CORPORATIONS

Canadian Aggregates, Limited.....	July 18, 1930
Canadian Gypsum Company, Limited.....	July 11, 1931
Canadian Industrial Alcohol Company, Limited.....	Nov. 1, 1930
Canadian Pacific Railway Company (Contract "A").....	Aug. 1, 1931
Canadian Pacific Railway Company (Contract "B").....	Aug. 1, 1931
Gomoll Brick & Tile Works.....	Mar. 21, 1931
Hecker-H-O Company of Canada, Limited.....	Aug. 17, 1930
His Majesty The King, represented by the Minister of National Defence (Contract "A").....	Sept. 1, 1930
His Majesty The King, represented by the Minister of National Defence (Contract "B").....	Sept. 1, 1930
His Majesty The King, represented by the Minister of National Defence.....	April 1, 1931
International Nickel Company of Canada, Limited.....	May 1, 1931
Morrow & Beatty, Limited.....	Mar. 2, 1931
Ontario Rock Company, Limited.....	April 1, 1931
Ontario Supply and Transport Company, Limited.....	Mar. 1, 1931
Republic Carbon Company, Incorporated.....	July 15, 1931

## Right-of-Way

## Rural Power Lines

A very extensive programme of construction work on rural power transmission lines was carried out during the year, wood pole lines having been constructed in the following rural power districts: Acton, Alexandria, Alvinston, Amherstburg, Aylmer, Ayr, Baden, Bala, Barrie, Barton, Beamsville, Beaumaris, Beaverton, Belle River, Belleville, Blenheim, Bond Lake, Bothwell, Bowmanville, Bradford, Brampton, Brant, Brigden, Brighton, Brockville, Burford, Chatham, Chesterville, Clinton, Cobourg, Colborne, Cookstown, Creemore, Delaware, Dorchester, Dresden, Dundas, Dutton, Elmira, Elmvale, Elora, Essex, Eugenia, Exeter, Fenelon Falls, Forest, Galt, Georgetown, Georgina, Goderich, Grantham, Guelph, Haldimand, Harriston, Harrow, Hawkestone, Huntsville, Ingersoll, Innisfil, Jordan, Kemptville, Keswick, Kingston, Lakefield, Listowel, London, Lynden, Mariposa, Markdale, Markham, Martintown, Maxville, Medonte, Merlin, Midland, Millbrook, Milton, Milverton, Mitchell, Napanee, Nepean, Newcastle, Newmarket, Niagara, North

Bay, Norwich, Norwood, Omemee, Orangeville, Oshawa, Owen Sound, Palmerston, Perth, Peterborough, Petrolia, Port Hope, Port Perry, Prescott, Preston, Ridgetown, Ripley, St. Jacobs, St. Marys, St. Thomas, Saltfleet, Sandwich, Sarnia, Sarnia Beach, Seaforth, Shelburne, Simcoe, Smiths Falls, Sparrow Lake, Stratford, Strathroy, Streetsville, Tara, Tavistock, Thamesville, Tilbury, Tillsonburg, Trenton, Utterson, Uxbridge, Wallaceburg, Walsingham, Walton, Waterdown, Waterford, Welland, Wellington, Williamsburg, Woodbridge, Woodslee, Woodstock, Wroxeter.

Lines of this class are, as far as possible, located on public roads, but in many cases, owing to the presence of shade trees or to other physical conditions, it has been found advisable to construct portions of such lines on private property. In such cases the necessary rights have been secured from the land owners by the Right-of-Way department. Claims for damages to crops and fences have been settled and tree-trimming rights obtained. In many cases the consent of the Department of Public Highways or the County, or other authority having control of the roads affected, was secured. The widening or realignment of various highways by provincial or municipal authorities has in many instances necessitated a change of pole locations. In this connection negotiations between the Commission and the different corporations concerned have been carried out in nearly every case without friction.

#### Low-Tension Lines

The construction of low-tension lines, as in the case of rural power lines, required the securing of a large number of tree-trimming rights covering shade trees on lands adjacent to the roadways. Also in many cases it was considered advisable to locate poles and anchors on private properties, for the doing of which rights were secured.

The following is a list of low-tension lines on which construction work was carried on during the year:

Healey Falls to Norwood.  
Todmorden Junction to Brinlock Corners.  
Oshawa to Whitby.  
Norwood Station to Havelock.  
Wellington to Picton.  
Warkworth Transformer Station to Welcome Junction.  
Newcombe Junction to Welcome Junction.  
Oshawa to Port Hope.  
Bowmanville to Oshawa.  
Whitby Junction to Whitby Municipal Station.  
Seymour to Rawdon Townline.  
Sidney to Harold.  
Sterling to Harold.  
Belleville Switching Station to Belleville Distributing Station.  
Cataragui to Napanee Transformer Station.  
Picton Junction to Brighton.  
Madawaska to Portage Du Fort.  
Galetta Distributing Station to Chats Falls.  
Chesley to Paisley.  
Hanover to Walkerton.  
Teeswater to Wingham.  
Hanover Switching Station to Walkerton Junction.  
Durham Russell Company to Mount Forest Junction.  
Mount Forest to Harriston.

Dundalk Junction to Dundalk Distributing Station.  
Durham to Mount Forest.  
Meaford Junction to Collingwood Distributing Station.  
Kilsyth Junction to Owen Sound Distributing Station.  
Walkerton Junction to Walkerton Quarries Junction.  
Kinloss to Holyrood.  
Holyrood Junction to Kincardine Distributing Station.  
Kinloss Junction to Kincardine.  
Walkerton Quarries Junction to Teeswater Junction.  
Waubashene to South Falls.  
Trethewey Falls to South Falls.  
Ragged Rapids to Big Chute.  
Ragged Rapids to Bala.  
Kitchener to Hanover.  
Bala Distributing Station to Butterfly Junction.  
Butterfly Junction to Port Carling.  
Butterfly Junction to Mactier.  
Southampton Generating Station to Southampton Junction.  
Hepworth to Wiarton.  
Derby Mills to Hepworth.  
Southampton Junction to Port Elgin.



## Low-Tension Lines—Continued

High Falls Generating Station to Balderson Distributing Station.  
 Forfar to Westport.  
 Smith Falls to Merrickville.  
 Carleton Place Junction to Carleton Place Distributing Station.  
 Cornwall Transformer Station to Winchester Junction.  
 Cornwall Transformer Station to Grants Corners.  
 Cornwall Transformer Station to Glengarry P. & P. Company Junction.  
 Winchester to Chesterville.  
 Chesterville to Finch.  
 Williamsburg Distributing Station to Winchester Distributing Station.  
 Lyn Distributing Station to Eugene Phillips Company.  
 Lyn to Athens.  
 Cornwall Station to Winchester Junction.  
 Winchester Junction to Prescott Station.  
 Winchester Junction to Cardinal Distributing Station.  
 Lower Lakes Terminal Junction to Prescott Distributing Station.  
 Uttersen Distributing Station to Windermere.  
 Windermere to Rosseau.  
 Bath Feeder Line.  
 Dundas to Caledonia.  
 Guelph to Preston.  
 Preston Transformer Station to Preston Municipal Station.  
 Preston High Tension Station to Hespeler Junction.  
 Kitchener Transformer Station to Waterloo.  
 Stratford to Sebringville.  
 Woodstock Transformer Station to London Transformer Station.  
 Woodstock Transformer Station to Dufferin Construction Company.  
 Woodstock Transformer Station to Norwich Junction.  
 St. Thomas to Sarnia.  
 Brant to Brantford.  
 Essex Transformer Station to Maidstone.  
 Essex Transformer Station to Malden Junction.  
 Essex Transformer Station to Canada Salt Company Junction.  
 York Transformer Station to Weston Municipal Station.  
 St. Clair Station to Sarnia Junction.  
 Wiltshire to Weston.  
 Allenburg Junction to Dundas Transformer Station.  
 Grimsby to Beamsville.  
 Chippawa Junction to Niagara Waterworks.  
 Lythmore to DeCewville.  
 Caledonia to Hagersville.

Hagersville to Jarvis.  
 York Mills Distributing Station to Newmarket Distributing Station.  
 York Mills to Steeles' Corner.  
 Keswick Distributing Station to Sutton Distributing Station.  
 Guelph to Fergus.  
 Fergus Junction to Elora Distributing Station.  
 Seaforth to Walton.  
 Sebringville to Milverton.  
 West Lorne to Rodney.  
 Burford Distributing Station to Can. Aggregates Distributing Station.  
 Brant Sand & Gravel Junction to L. E. & N. Railway Junction, Brantford.  
 Streetsville Junction to Milton Municipal Station.  
 Ridgetown Junction to Rondeau Junction.  
 Bothwell Junction to Wallaceburg Junction.  
 Wallaceburg Junction to Dominion Sugar Company Junction.  
 Dresden Junction to Oil Springs Junction.  
 Fletcher Junction to Merlin Distributing Station.  
 Maidstone to Essex Junction.  
 Harrow Distributing Station to Kingsville Distributing Station.  
 Amherstburg Junction to Harrow Distributing Station.  
 Leamington Junction to Kingsville Distributing Station.  
 Cottam Junction to Leamington.  
 Weston Junction to Albion Junction.  
 Weston Junction to Humber Junction.  
 Albion Park Junction to Woodbridge Distributing Station.  
 Forest Junction to Petrolia Distributing Station.  
 Sarnia Junction to Perth Distributing Station.  
 Sarnia Junction to Forest Junction.  
 Beaver Board Junction to Ontario Paper Junction.  
 Nipigon Generating Station to Port Arthur High Tension Station.  
 Sprucewood to Dorian.  
 William Street Junction to Great Lakes Power & Paper Company.  
 Amprior to Galetta.  
 Galetta to Chats Falls.  
 Waubashene to Midland.  
 Coldwater Junction to Elmvale Junction.  
 Elmvale to Fergusonvale.  
 Carlington to Richmond.  
 Kirkfield Junction to Beaverton.  
 Callendar to North Bay.  
 North Bay to Sturgeon Falls.  
 Smoky Falls to North Bay.  
 Bingham Chute Junction to Callendar Distributing Station.

## Substation Sites

Sites were purchased during the year for substations in the following places: Belleville, Berkeley, Comet, Forfar, Goderich, Hepworth, Kingston, Leamington, London, Paisley, Port Elgin, Pottageville, Richmond Hill, Sarnia, Waterloo, Willowdale.



### **Sites for Operators' Residences**

Lands on which to erect dwellings for operators have been purchased at Calder, La Forest and Timmins.

### **Flooding Rights**

The balance of the outstanding flooding rights in connection with the raising of the waters of lake Wanapitei have been secured and incidental damage claims arranged.

### **Hydro 220,000-Volt Lines**

The remainder of the tower rights on the second circuit, unsettled in 1930, have been arranged and at least ninety per cent. of the required rights on the third and fourth circuits have been secured. The acquisition of this right-of-way was in many cases difficult, and involved prolonged negotiations. Before the lines could be constructed, it was found necessary to do a large amount of clearing which was nearly all done by farmers over whose lands the lines pass.

A few cases in which settlements could not be secured by negotiation were referred by the owners to the official valuator appointed under the provisions of the 1931 amendment to The Power Commission Act, and settlements were finally reached in this way.

### **General**

The water power in the Township of Mattawan known as Les Erables rapids was purchased from the Klock estate during the year, as was also the power plant of the Kirkfield Portland Cement Company on the Gull river in the Georgian Bay system.

Several parcels of land no longer required for Commission purposes have been disposed of. Leases have been secured for a number of offices for electrical inspection work and for rural power district purposes. Negotiations have been completed with the Dominion Government for rights to carry power lines over a number of Indian Reserves. Several claims for damages incidental to the operation of power lines have been satisfactorily adjusted.

## SECTION II

### OPERATION OF THE SYSTEMS

The loads of the various systems during the past year show both increases and decreases. Due to this fact it is difficult to make any brief statement summarizing load conditions in general, and for the same reason it would be quite easy to draw incorrect conclusions from individual figures which might not be representative of general conditions.

In this section of the Report are given load graphs for the various systems, showing the demand for power from month to month during the year, and extending back over a period of years according to the age of the system or the length of time for which proper meter records have been available. By reference to these load graphs a comprehensive view of the loads and their trends on the various systems may be obtained.

Subject to such minor exceptions as may be observed from an inspection of the load graphs, the general statement may be made that the Georgian Bay system showed an increase of about six per cent, the Eastern Ontario and Northern Ontario systems remained practically stationary, and the Niagara and Thunder Bay systems showed decreases.

On the Thunder Bay system the decrease amounted to seven per cent on the peak load for the year, and to sixteen per cent on the total kilowatt-hours generated. Prevailing business conditions, and the resultant complete or partial closing of large pulp and paper mills, accounted for the decrease on this system. It should be understood that the figures mentioned refer to the power actually supplied. For the month of October, 1931 the revenue load, that is the power sold and paid for according to contract, exceeded the actual power supplied by over 8,000 h.p.

On the Niagara system the total load of the various municipalities remained about the same as during the previous year. If a small area in the neighbourhood of the Niagara river is omitted, the records show that the remaining part of the Province comprised in the Niagara system, extending from Toronto to Windsor, had an actual increase of  $\frac{6}{10}$  of one per cent on the peak load, and a decrease in the average load during the whole year of only  $\frac{4}{10}$  of one per cent. The variation was so slight that the load of the municipalities may be considered as remaining practically the same as during the previous year.

On the Niagara system there are a number of large industrial plants in the vicinity of the Niagara river and Welland canal, which are supplied directly by the Commission instead of through municipal commissions. These plants were particularly affected by the business depression and there was a marked decrease in their load. As a result the combined municipal and industrial load shows a decrease, amounting to 593,000,000 kilowatt-hours, nearly seventeen per cent, and the maximum load decreased 68,000 h.p. or  $7\frac{1}{2}$  per cent. Nearly all of the decrease can be attributed to the decline in the load of the industrial plants mentioned. As most of these industries take power under contracts requiring minimum payments as long as the power is held available for them by the Commission, it will be appreciated that the revenue load did not decline to the extent indicated by the graph for the actual load. For example, the power paid for by these industries in October exceeded their actual peak loads by over 83,000 h.p. This situation is well shown on a supplementary graph which this year is given for the Niagara system. (See page 11.)

Reference to the load graph of the Niagara system will give a clear idea of the load and its general trend. The graph includes the load of the large industrial consumers supplied directly by the Commission, as well as the load of the various municipalities. The importance of this industrial load and its effect on the load curve during the present business depression was explained in the preceding paragraph. The load graph shows a steady increase, year after year, up to 1928, a year of great industrial activity and general prosperity. Industrial production in Canada according to statistics published by the Dominion Government, reached its maximum in the second month of 1929, declining sharply in the third month and continuing to drop steadily throughout 1929, 1930 and 1931. This general decline in industrial production was not immediately reflected in the demand for power on the Niagara system which continued to show large increases up to the end of 1929. Taking 1929 as the beginning of the industrial depression, and averaging the loads of the fiscal years 1929, 1930 and 1931, it will be found that the load increases of 1929 more than offset the decreases of 1931, and that the demand for power still exceeds that of 1928, the year before the depression began. The effect of the business depression on the load, averaged over the three-year period, has been only to suspend the normal rate of increase.

While the business depression has had an adverse effect on the loads of all systems, checking growth where it did not actually cause a decrease, it is interesting to note that, aside from a small territory in the neighbourhood of the Niagara river and in the neighbourhood of Port Arthur, both of which have already been discussed, the Commission's load throughout the Province shows a decrease of less than one-third of one per cent. (The Dominion Power & Transmission system is not included for either 1931 or 1930, as complete figures for comparative purposes were lacking in 1930.) Considering the unquestionable severity of the business depression, this insignificant decrease in the total use of power for domestic, commercial and manufacturing purposes, exclusive of the territories mentioned, is surprisingly small.

If the load is analyzed in relation to revenue, consideration should be given to the minimum payments required by existing power contracts. At the end of the fiscal year, the revenue load, that is the power being sold and paid for, exceeded the actual load by over 90,000 h.p.

It has been shown that the Commission's load throughout the Province, exclusive of a few large industries, has held its own without any noticeable



### TOTAL POWER GENERATED AND HYDRO-ELECTRIC GENERATING PLANTS

Generating Plants	Rated electrical horsepower of generators	Normal plant capacity Oct. 31, 1931 horsepower	Peak load during fiscal year 1930-1931 horsepower	Total output during fiscal year 1930-1931 kilowatt-hours
<b>Niagara system</b>				
Queenston-Chippawa—Niagara river....	533,000	522,000	540,214	2,252,137,000
"Ontario Power"—Niagara river.....	161,000	183,000	169,571	231,787,000
"Toronto Power"—Niagara river.....	110,000	147,000	145,845	226,255,000
Chats Falls—Ottawa river.....	26,700	24,000	21,448	1,402,500
<b>Dominion Power and Trans. system*</b>				
Decew Falls—Welland canal.....	56,400	50,000	48,800	130,690,300
Steam plant—Hamilton.....	26,800	24,000	24,933	516,600
<b>Georgian Bay system</b>				
South Falls—South Muskoka river.....	5,100	5,350	5,689	22,877,520
Hanna Chute—South Muskoka river....	1,550	1,600	1,743	6,187,200
Trethewey Falls—South Muskoka river..	2,300	2,200	2,145	5,990,400
Bala No. 1 and No. 2—Muskoka river...	680	560	558	1,202,520
Big Chute—Severn river.....	4,610	5,625	5,871	15,570,240
Waddells Falls—Severn river.....	860	1,100	965	2,821,820
Eugenia Falls—Beaver river.....	6,440	7,300	7,493	6,374,800
Hanover—Saugeen river.....	350	400	422	46,215
Walkerton—Saugeen river.....	375	500	523	1,297,800
Southampton—Saugeen river.....	415	370	368	1,439,700
Sauble Falls—Saugeen river.....		100	120	100,900
<b>Eastern Ontario System</b>				
Sidney-Dam No. 2—Trent river.....	4,020	4,020	4,692	12,700,950
Frankford-Dam No. 5—Trent river.....	3,480	3,480	3,539	8,613,500
Meyersburg-Dam No. 8—Trent river....	6,600	6,430	7,721	21,419,000
Hague's Reach-Dam No. 9—Trent river..	4,800	4,500	5,094	13,551,230
Ranney Falls-Dam No. 10—Trent river..	9,650	9,650	10,456	28,817,640
Seymour-Dam No. 11—Trent river.....	4,020	4,020	4,357	12,329,920
Heely Falls-Dam No. 14—Trent river....	12,060	12,060	15,952	34,822,800
Auburn-Dam No. 18—Otonabee river....	2,010	2,010	2,815	7,797,340
Fenelon Falls-Dam No. 30—Sturgeon river	1,070	860	1,019	1,823,300
High Falls—Mississippi river.....	2,810	2,440	3,016	8,162,520
Carleton Place—Mississippi river.....	530	430	400	292,512
Calabogie—Madawaska river.....	5,400	4,300	2,413	5,726,578
Galetta—Mississippi river.....	1,070	860	1,045	3,012,275
<b>Thunder Bay system</b>				
Cameron Falls—Nipigon river.....	68,400	75,000	64,990	147,678,000
Alexander—Nipigon river.....	51,300	54,000	30,100	102,624,000
<b>Northern Ontario system</b>				
<b>Nipissing district</b>				
Nipissing—South river.....	2,750	2,350	2,426	5,812,160
Bingham Chute—South river.....	1,200	1,200	1,327	2,430,640
Elliott Chute—South river.....	1,930	1,750	1,862	2,584,400
<b>Sudbury district</b>				
Coniston—Wanapitei river.....	5,100	5,500	4,424	16,439,952
McVittie—Wanapitei river.....	2,680	2,550	2,815	13,461,624
Stinson—Wanapitei river.....	5,360	6,150	5,496	17,822,184
<b>Patricia district</b>				
Ear Falls—English river.....	5,400	5,000	1,912	8,082,800
<b>Total generated.....</b>	<b>1,138,220</b>	<b>1,183,665</b>	<b>1,154,579</b>	<b>3,382,702,840</b>

\*In process of incorporation with the Niagara system.

NOTE.—The first column of figures in the above table shows the electrical horsepower equivalent of the rating put on the generators by the manufacturers. These ratings do not take into consideration water conditions and other factors which affect the over-all capacity of the generating plant. The plant capacities which appear in the second column of figures are nominal operating ratings and cannot be used in determining the power continuously available in the case of individual plants or any group of plants. Plant ratings, regardless of installed capacity, depend upon a number of factors, such as net head, water supply, machine outages, changes in operating schedule, and load factor, all of which factors may vary from time to time. It may be necessary to change these ratings somewhat from year to year due to the above causes, and also due to plant additions or alterations.



## PURCHASED—ALL SYSTEMS

## POWER PURCHASED

Power source	Contract amount horsepower	Total purchased kilowatt-hours
Canadian Niagara Power Co.—25 cycle.....	20,000	43,248,900
Gatineau Power Co.—25 cycle.....	260,000	875,385,700
Chats Falls Power Co.....	24,000	1,402,500
Canadian Niagara Power Co.—66 cycle.....	10,000	60,136,000
Campbellford Water & Light Commission*.....		3,609,000
Peterborough Hydraulic Power Co.*.....		5,860
Cedars Rapids Power Co.....	7,500	27,497,000
M. F. Beach Estate.....	500	936,500
Rideau Power Co.....	487	2,232,250
Ottawa & Hull Power & Mfg. Co.....	20,000	66,961,800
Gatineau Power Co.—60 cycle.....	24,000	72,171,600
Orillia Water, Light & Power Commission*.....		96,390
Abitibi Pulp & Paper Co.—Sturgeon Falls.....		1,101,824
Ontario Power Service Corporation.....	25,000	26,650
Total purchased.....	391,487	1,154,811,974
Total available capacity, generated and purchased, 1931.....	1,575,171	
“ “ “ “ “ “ 1930.....	1,365,781	
Increase.....	209,390	
Total kilowatt-hours, generated and purchased, 1931.....		4,537,514,814
“ “ “ “ “ “ 1930.....		5,096,347,240
Decrease.....		558,832,426

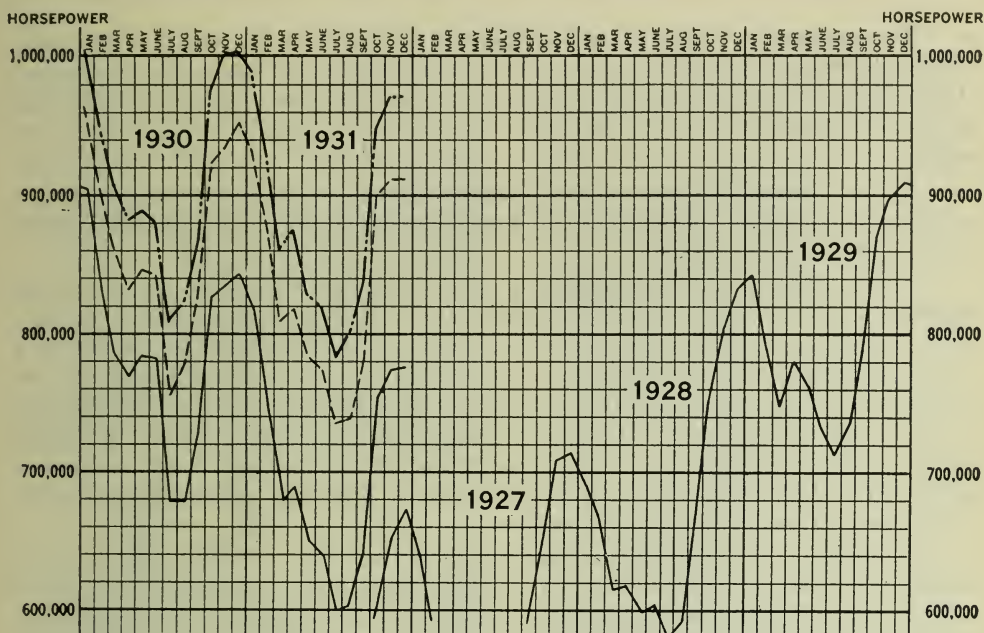
\*Reciprocal arrangement for surplus power.

NOTE.—In the 1931 tabulations for power generated and purchased the total available capacity, and also the total kilowatt-hours generated and purchased, include the figures for the D. P. & T. System from the beginning of the fiscal year, November 1, 1930. These tabulations in the 1930 Annual Report did not include the D. P. & T. System, as was noted, due to the fact that this system was taken over by the Commission during that fiscal year and figures for the entire year were not available.

decrease, and it would seem to be highly probable that, but for an actual curtailment of load on the part of many smaller industries, there would have been a substantial increase. This may be deduced from the fact that curtailment on the part of many industries is known to have taken place, and that there must have been a material increase in other load, perhaps due in large part to new uses of electricity, in order to offset this curtailment. If this view is justifiable, there is a very large amount of industrial equipment, already installed but now idle, which is ready to absorb power as soon as there is any possibility of doing so. The owners of this equipment have already provided the capital outlay connected therewith and would be put to relatively small expense in order to make use of it. In order to provide for the materialization of this load on short notice, the Commission must provide a substantial surplus of generating capacity over present requirements under conditions of curtailed use.

The accompanying table shows the total power generated and purchased for all systems. The peak load and total output is shown for each generating station. These figures are of some value in determining the load carried by the individual plants, but, due to the diversity in the times at which the peaks





SUPPLEMENTARY DIAGRAM—NIAGARA SYSTEM PEAK LOADS

## LEGEND

Canadian coincident peak loads delivered to system (not including export) as per graph on opposite page.....

Sum of:—Canadian coincident peak loads; contractual export; and power paid for but not taken by companies supplied direct by Commission.....

Sum of:—Canadian coincident peak loads; contractual export; and total contractual obligations to companies supplied by the Commission in excess of power actually taken by them.....

NOTE: In 1930 and 1931, certain companies supplied directly by the Commission did not avail themselves of the full amounts of power provided for in their contracts with the Commission, and consequently the "Niagara System Peak Loads" curve for these years falls substantially below the total of contractual obligations of the Commission to supply power in the Niagara system in these years. Also, the "Peak Load" diagram, as noted thereon, excludes contractual obligations for export of power. In order to indicate as closely as possible the total demands—including these contractual obligations—for which power had to be provided, the above diagram incorporates two additional curves.

The quantities here added are accurate in themselves. The actual peak loads, however, that would have resulted had the full contractual rights been exercised, might have been slightly greater or less than the quantities shown in the diagram, because such peak loads would be increased by line losses and reduced by possible diversity—factors which cannot be evaluated exactly.

occurred, the sum of these peaks does not correspond with the various system peak loads. Special care must be exercised to ensure that the various data respecting capacities, loads, etc., are not employed in any manner at variance with the explanatory and cautionary comments respectively applicable thereto.

In the areas served by the Georgian Bay and Eastern Ontario systems, and in the Nipissing district, the dry summer season, the third such season in succession, seriously reduced the stream flow available for the generating plants. The combined effect of the sustained demand for power, and the reduction in stream flow, would have created serious power shortages on all these systems if other reserves had not been available. On the Georgian Bay system a shortage was averted by transferring power from the Niagara system, and on the Eastern Ontario system and Nipissing district by purchasing power.



The generating capacity of the Niagara system was increased on October 25, 1931, when two generators in the Chats Falls plant went into operation. Their output was restricted due to construction work, and, as only a few days of the fiscal year remained, the effect on the load situation for the year was slight.

At the Alexander plant on the Thunder Bay system, two more generators were put into service, completing the power house and adding 36,000 horsepower to the generating capacity.

Three other notable extensions of the Commission's systems are: (1) the completion of the third 220,000-volt line from Leaside station to the Ottawa river, connecting with the new plant at Chats falls; (2) the construction of a new 22,000-volt line connecting the Nipissing district with the Abitibi Power and Paper Company's generating station at Crystal falls, and (3) the placing in service of 189 miles of 110,000-volt transmission line from Hunta to Copper Cliff, in the Sudbury district, to supply the International Nickel Company sub-station at Copper Cliff with 25-cycle power from the generating plants of the Ontario Power Service Corporation.

At Niagara Falls advantage was taken of the reduction in the load to do extensive maintenance work under conditions more favorable than would have been the case in previous years when load conditions demanded that equipment be kept available for service. Similar remarks apply to the Cameron Falls plant on the Thunder Bay system, but on that system increased generating capacity was combined with a reduction in load to release equipment that it had been impossible to take out of service for some years. On the other systems, where there were little or no reductions in load, no special opportunity of this kind existed, but all plants of the Commission have been maintained in efficient operating condition; details of the work are given in the following sections of this Report.

#### **Forestry Division**

This new branch of the Operating department has been active throughout the year in various parts of the Province. Its staff has been employed continuously in the Niagara system, working principally in the Niagara Falls, Essex, Kent, Dundas, Woodstock, Stratford and London districts. During part of the year work was carried on in the Eugenia and Severn districts, and some work has been done in the Central Ontario and St. Lawrence districts.

The services of the forestry staff have been utilized also by the Distribution department for pruning trees on newly constructed rural lines along some of the main highways. The Alliston Public Utilities Commission and the Comber Hydro-Electric System each employed a forestry squad to prune the trees within their municipal limits for line clearance. The services of the specially-trained men included in this division are upon request available to the Hydro commission of any municipality.

During the fiscal year 38,669 trees have been pruned at an average cost of slightly less than \$1.80 per tree, which figure includes special training expense, all overhead, travelling and incidental expenses, as well as insurance and depreciation of tool equipment.

This compares favorably with the previous cost to the Commission of \$2.53 per tree for work done by outside firms under contract, and with the costs of a large power company in the United States reported as trimming 113,000 trees at an average cost of \$2.20.





**OPERATING DEPARTMENT—FORESTRY DIVISION**

On left tree improperly pruned. On right, after pruning by Forestry Division to accommodate Hydro line.

While the expense of this work is heavy, there has been an increasing demand from the public generally for the preservation of the life and beauty of the trees along the highways on which many of the Commission's power lines are located. Expressions of approval from various official and local sources indicate that the work of the Forestry division has been carried out in a manner satisfactory to the public generally. At the same time the necessary protection to the Commission's power lines and service has been given.

**Radio Communication**

The Commission's short-wave experimental radio stations at Toronto, Cameron Falls and Ear Falls have been in service all year.

Communication between the Toronto and Cameron Falls stations has been relatively satisfactory, there being but few occasions during each month when atmospheric conditions rendered communication impossible. Considerable trouble has been experienced at Toronto from electrical interference from an outside source, but early in the year a change was made in the time of day at which these stations were operated which to a large extent alleviated this trouble.

During the year there were no special changes in equipment at Toronto or at Cameron Falls with the exception of the addition of a portable standard

frequency oscillator unit which, in conjunction with monitoring units already a part of the station equipment, is being used to maintain the stations on licensed frequencies.

At Cameron Falls a new radio cabin has been constructed, the radio equipment being transferred to this cabin early in the year. The cabin is situated on a small knoll overlooking the camp, and this new location has enabled the radio station to give improved service.

The short-wave experimental radio station installed last year at Ear Falls generating station, Patricia district, has continued in operation throughout the year with satisfactory results, and no changes in equipment or special maintenance work were necessary.

Contact between this station and the similar station at Toronto has been fairly continuous throughout the year although there were a few occasions on which due to adverse atmospheric conditions communication could not be maintained.

Tests, looking toward communication between the Cameron Falls station and the Ear Falls station have been carried out during the year and are still in progress. Upon completion of these tests it is expected that reliable communication will be obtained between these stations.

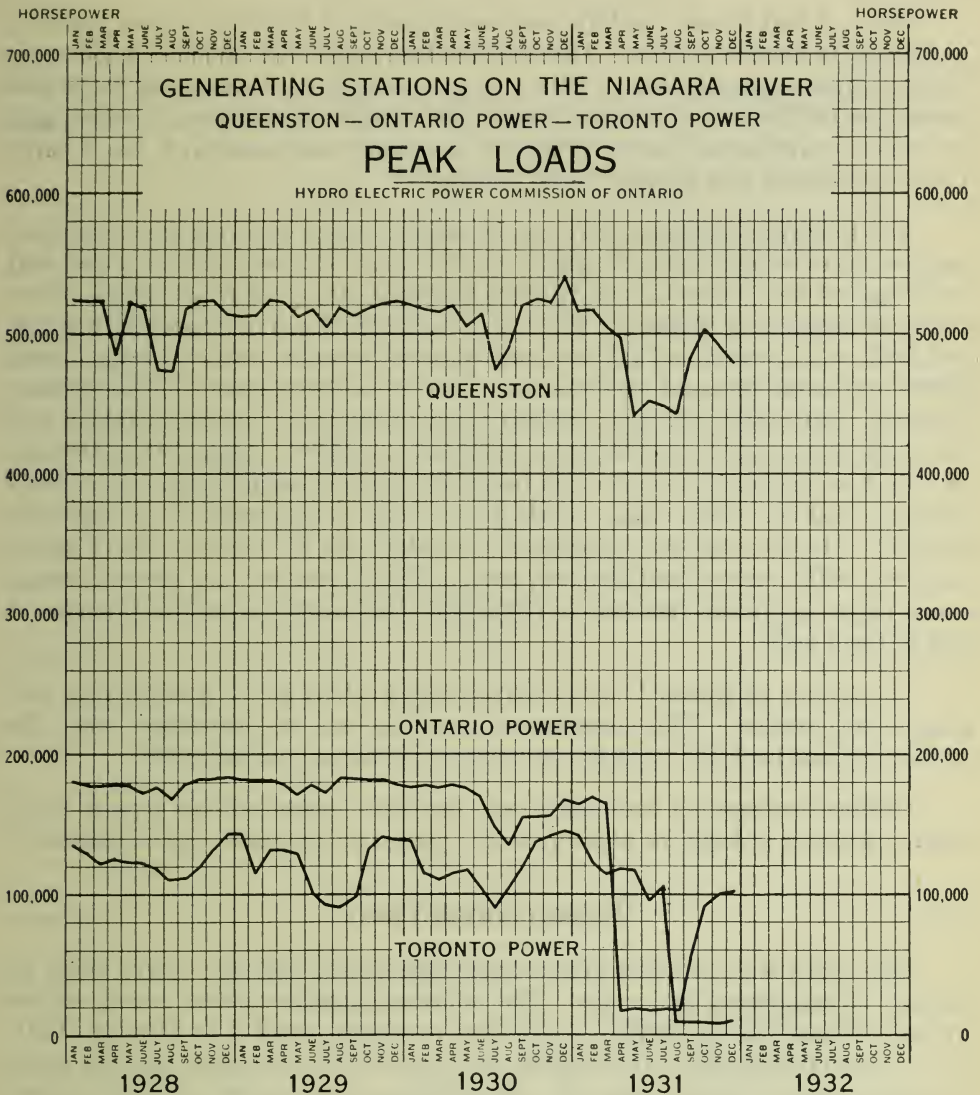
## NIAGARA SYSTEM

### **Queenston Generating Station**

The operation of this plant was extremely satisfactory throughout the year. There was only one failure of equipment: on May 5, 1931, the thrust bearing on No. 9 unit burned out. A spare bearing was installed, and the unit returned to service on May 31.

The following machines were removed from service during the year for inspection, repair and overhaul: December 10 to December 30, 1930, the two service units supplying power for station service were shut down, the stator coils cleaned and painted, the field insulation repaired and painted, and the turbines overhauled and guide bearings repaired. March 24 to March 31, No. 7 unit: stator coils and field coils cleaned and painted, guide bearings repaired, new indicating rod installed and the main valve seat on the Johnson valve repaired. April 7 to April 30, No. 10 unit: turbine guide bearing realigned and governor equipment adjusted to improve speed regulation. April 9 to April 30, No. 9 unit: stator coils and field coils cleaned and painted, guide bearings repaired, turbine runner welded, and Johnson valve seat and control valves repaired. April 22 to April 30, No. 8 unit: stator coils and field coils cleaned and painted, guide bearings repaired, turbine runner welded, and Johnson valve seats repaired. May 4 to May 31, No. 6 unit: stator coils and field coils cleaned and painted, guide bearing repaired, turbine runner welded, and main seat on Johnson valve repaired. May 25 to August 3, No. 3 unit: unit was completely dismantled to permit rebuilding concrete cone in draft tube, stator coils and field coils cleaned and painted, turbine runner rebuilt by welding, turbine seal rings replaced, turbine journal sleeve trued up, guide bearing repaired, control valves relined, Johnson valve seats repaired, and complete unit realigned. September 1, No. 4





unit: this unit was taken out of service for repairs to turbine runner and seal rings, and for re-insulation of the generator field poles. Work was not quite completed at end of fiscal year.

The usual annual inspection of all electrical, hydraulic and mechanical equipment was carried out and repairs made where necessary. Due to the disintegration of rock on the cliff above the power house it was necessary to scale a large portion of the cliff and build retaining walls.

### Ontario Power Plant

No serious troubles were experienced in the operation of the Commission's Ontario Power plant during the year. One coil failed in No. 1 unit while on load on October 10. This did not necessitate the replacement of any coils.

No. 1, 2, and 3 main conduits were unwatered and inspected during the year, and found in good condition. This was the first inspection of No. 3 wood stave conduit since its installation in 1918. It was possible to unwater and make this inspection of No. 3 at this time, due to the conduit having been covered with a concrete envelope last year. While No. 3 conduit was unwatered, No. 3 surge tank was cleaned and painted inside and out.

The following machines were out of service during the year for inspection, repairs and overhaul: April 20 to July 14, No. 11 unit: generator stator and field coils cleaned and painted, new runners installed, and seal rings, cheek plates and gates repaired or replaced. May 11 to August 8, No. 4 unit: generator stator and field coils cleaned and painted, new runners installed and seal rings, cheek plates and gates repaired or replaced. June 24 to September 23, No. 9 unit: generator stator and field coils cleaned and painted, new runners installed, and the cheek plates, seal rings and gates repaired or replaced. August 14 to October 28, No. 6 unit: generator stator and field coils cleaned and painted, new runners installed and the seal rings, cheek plates and gates replaced or repaired. September 18, No. 10 unit: generator was taken out of service to have stator and field coils cleaned and painted, new runners installed and the seal rings, cheek plates and gates repaired or replaced. This work was still in progress at end of fiscal year.

The section of Queen Victoria park through which No. 3 conduit runs was graded and seeded. This grading and seeding was in connection with the concreting and back filling of No. 3 conduit carried out during 1930.

During the year all equipment was regularly inspected and repairs made where necessary to keep the plant up to the high standard set by the Commission.

### **Toronto Power Plant**

This plant was operated in the usual way during the year, there being no failures of equipment in service. The following machines were out of service during the year for inspection, repair and overhaul: April 6 to May 20, 1931, No. 11 unit: bronze sleeve installed on the cone shaft of the upper turbine, guide bearings renewed, turbine generally overhauled and new runners and distributors installed. June 18 to July 15, No. 9 unit: rivets renewed in the tubular main shaft. July 27 to August 10, No. 10 unit: rivets renewed in the tubular main shaft. November 30, 1931, to January 13, 1931, one service turbine was out of service for a complete overhauling.

The west branch tunnel, into which units 2, 4, 6, 8 and 10 discharge, was unwatered from September 29 to October 22, 1931, and the east tunnel, into which units 1, 3, 5, 7, 9 and 11 discharge, was out of service from October 22 to October 31, for inspection and repair. It is interesting to note that after twenty-five years of service these tunnels required less than three cubic yards of concrete to repair both the tunnels and the eleven draft tubes.

At the Toronto Power transformer station new line ground devices were installed, and the regular maintenance and repair work carried out.





### Chats Falls Plant—Ottawa River

The Chats Falls generating station and step-up transformer equipment was ready for service and placed in operation on October 25, 1931. Up to October 31, the end of the fiscal year covered by this Report, only two generators, No. 2 and No. 3, were available and these were operated at less than normal capacity on account of construction work still in progress.

### Transmission, Transformation and Distribution

The operation of the 220,000-volt section of the system was very satisfactory, there being no line or equipment failures during the year. There were five total interruptions on this system amounting to one hour and five minutes. Service to customers was affected only on two of these interruptions, for a total period of five minutes. Three of the interruptions were from causes external to the 220,000-volt system, and the other two probably were caused by lightning. Single line outages occurred on seven occasions, five apparently due to lightning, one to sleet, and one to an external cause.

The 110,000-volt transmission systems gave very satisfactory performance, and no complete interruption to service occurred during the year. The system was operated in three divisions, known as the yellow, green and blue, as in previous years, in order to promote continuity of service and limit stresses on equipment. On the green division there was one interruption of one and one half minutes caused by lightning. On the yellow system there were six interruptions, totalling nine minutes, three of which were from lightning, one from sleet, one from station trouble, and one from an external cause, and on the blue system five interruptions totalling fourteen minutes, one caused by lightning, one by sleet, two by station trouble and one by an external cause.

On January 5 and 6, sleet of moderate loading, together with gales, caused several circuit outages between Niagara and Dundas, but did not cause any serious damage. This disturbance also caused a number of interruptions on the low-tension lines in Brant, Woodstock, St. Thomas and Essex districts.

On February 7, a sleet storm affected the service in the Kent and Essex districts, but caused no serious trouble.

During the latter part of June there were a number of severe electrical storms which caused numerous outages on the circuits between Dundas and London, but, due to the number of tie lines, service was not seriously affected.

On July 17, high winds in the Stratford district caused the failure of twenty-seven poles on the low-tension lines feeding to the north and west of this station, causing a lengthy interruption to customers served by these lines.

The regular patrol, inspection and maintenance work was carried out on all lines during the year. All lines damaged by storms and otherwise were repaired, insulators were meggered and tested on both high-tension and distribution lines.

All towers on the original 110,000-volt circuit between Niagara Falls and Dundas were painted. The ground wire was replaced from Islington Junction to Bridgman Station, and vibration dampers were installed on the 110,000-volt lines between Queenston and Hamilton.

The low-tension lines in the Essex district were completely overhauled, the railway crossings in the Kitchener-Preston districts were rebuilt to conform to the specifications of the Board of Railway Commissioners, and a large amount of work was carried on at various places, due to highway improvements and other construction, necessitating the relocation of poles and towers.

The third 220,000-volt transmission line between Leaside station and the Ottawa river, was placed in service October 24, 1931, to carry the output of the Chats Falls development.

A new 110,000-volt circuit from East Hamilton station to the Stirton Street sub-station at Hamilton was placed in service.

The following 26,000-volt distribution lines were put in operation: From Comet junction to Comet distributing station; from St. Andrews to Pottageville; and from Keswick to Sutton.

The former 13,200-volt circuit between Willowdale and Keswick, carrying power on north Yonge street, was reinsulated and placed in service on 26,000 volts.

New 13,000-volt lines were put in service from Port Colborne transformer station to the Welland Canal; from the Welland transformer station to the Page Hersey Company, and from the Norton Company to the Niagara Falls Waterworks station.

Between West Lorne and Rodney, a new 4,000-volt circuit was built and the old circuit removed from the Commission's high-tension telephone lines.

All station equipment was inspected, and where required, overhauled, and repairs made to all damaged equipment.

There were eighteen failures of transformers during the year, some of which were returned to the manufacturers for repairs and the balance taken care of by the Commission's own maintenance staff. One 750-Kv-a. 110,000-volt unit was rebuilt for use as a spare unit at Hanover.

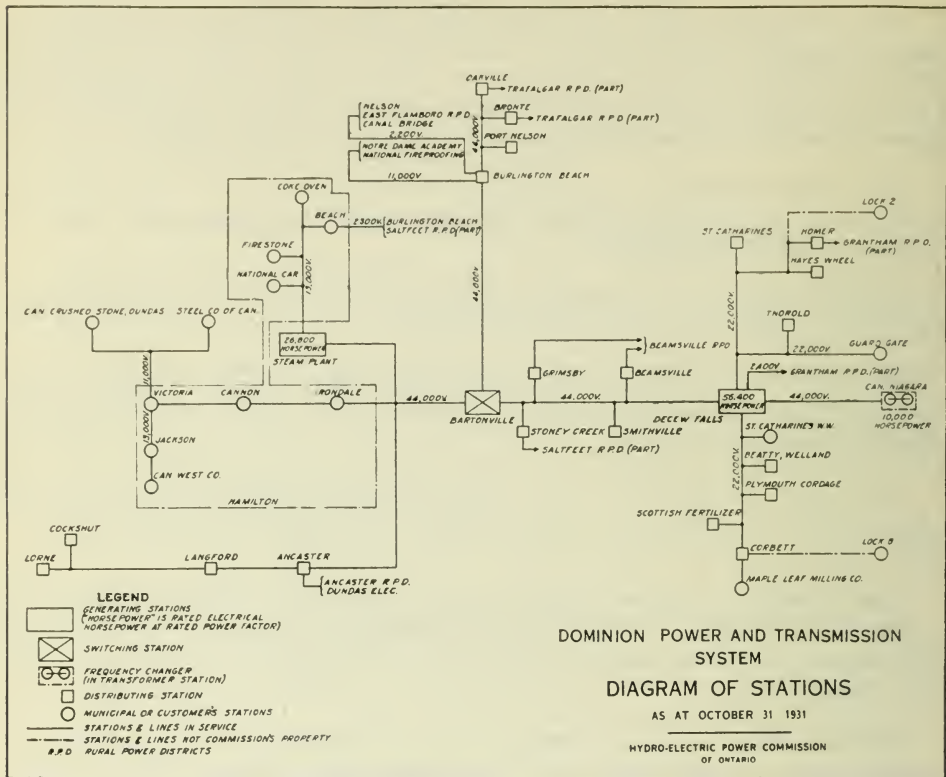
New control storage batteries were installed in Kent, Essex and Hamilton stations, and 50-watt radio transmitters were constructed and installed at Toronto, London, Essex and Niagara stations.

Modern telephone protective equipment was installed at Niagara Falls and at many other places on the Niagara system, providing better protection to all telephone instruments.

During the year a number of changes were made in the transformer capacity at high-tension stations and distribution stations, as covered in the electrical engineering and construction sections of this report.

The following new distributing stations were put in service during the year: Comet, Guelph rural, Kingsville, Newmarket, North Yonge Auto-transformer station, Pottageville, Richmond Hill, Sarnia Beach, Strathroy rural, Sutton, Willowdale. Old stations were dismantled at Bond Lake, Kingsville, and Newmarket.





## Dominion Power and Transmission System

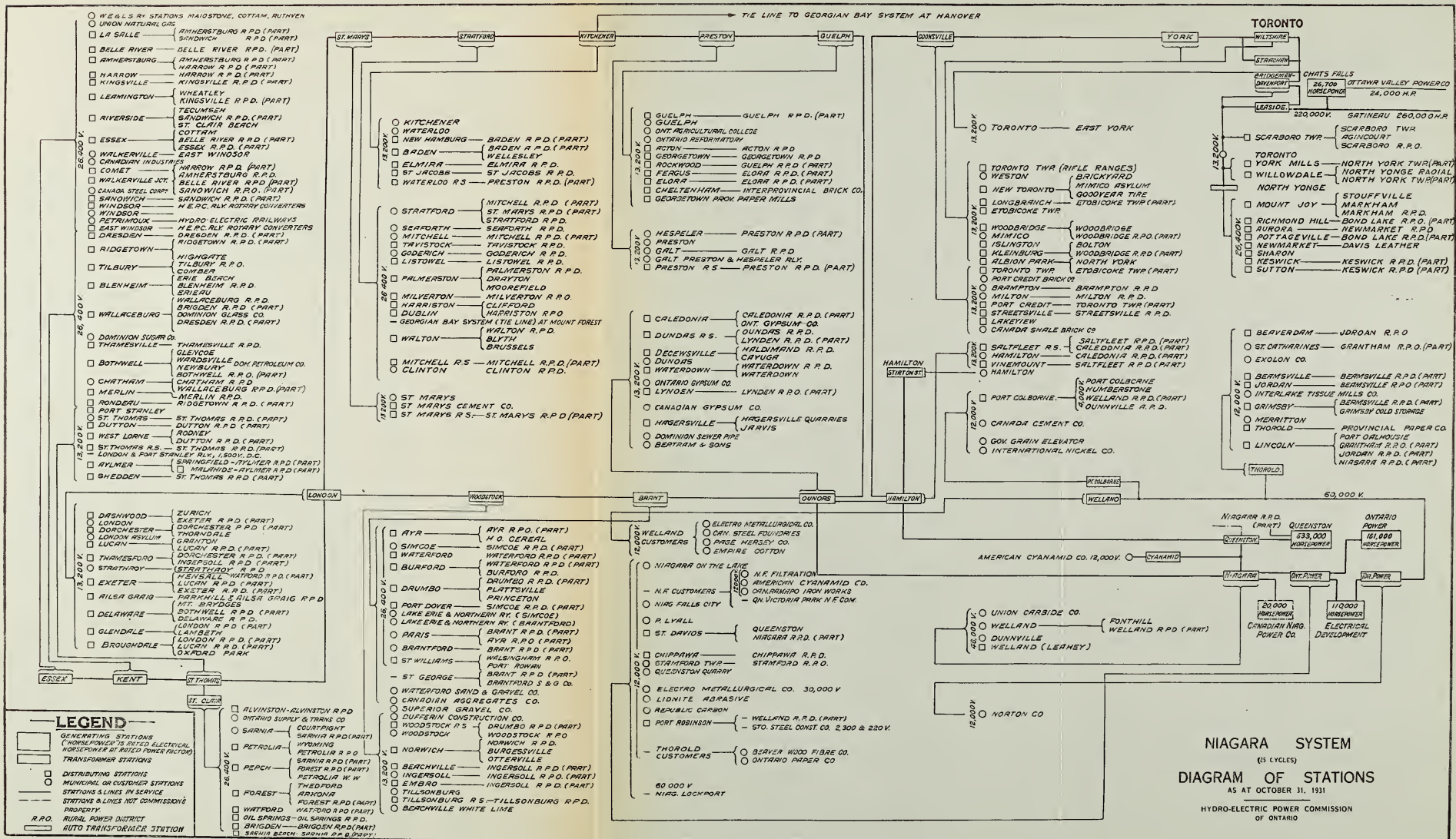
The Dominion Power and Transmission system was operated as a separate unit during the year, all power being supplied from the DeCew Falls generating station, the Hamilton steam plant, and the Canadian Niagara Power Company, in the same manner as previous to the acquisition of this system by the Commission.

In general there were no serious failures of equipment, and only one complete interruption to service on the system, of 58 minutes duration. In the Hamilton division there were nine interruptions, totalling one hour and twenty-eight minutes, five of which were caused by line failures and four by station equipment. In the Lincoln County district there were two interruptions totalling two hours and four minutes, one due to failure of equipment and one for extensive maintenance work.

At the DeCew Falls plant units number 0, 1, 3, 7 and 8 were given a general overhaul, including welding turbine runners and shafts, repairing seal rings and cleaning and painting generators. At the steam plant no major maintenance was required, but all equipment was kept in good operating condition.

On January 5 and 6, 1931, a severe wind and sleet storm on the Hamilton mountain damaged about one and a half miles of 44,000-volt circuits; these lines were rebuilt. The usual regular inspection and maintenance, including replacing of poles, crossarms and insulators, was carried out.







## NIAGARA SYSTEM—LOADS OF MUNICIPALITIES, 1929-1930-1931

Municipality	Peak load in horsepower			Change in load 1930-1931	
	Oct. 1929	Oct. 1930	Oct. 1931	Decrease	Increase
Acton.....	609.0	778.7	681.7	97.0	
Agincourt.....	123.0	131.3	149.0		17.7
Ailsa Craig.....	82.3	87.9	147.9		60.0
Alvinston.....	78.0	88.2	94.2		6.0
Amherstburg.....	573.7	600.5	714.5		114.0
Ancaster Township.....	351.2	250.6	277.5		26.9
Arkona.....	60.0	61.6	55.3	6.3	
Aurora.....	825.7	860.6	968.3		107.7
Aylmer.....	457.3	529.5	490.6	38.9	
Ayr.....	136.2	172.2	207.6		35.4
Baden.....	268.1	277.5	281.2		3.7
Barton Township†.....					
Beachville.....	260.0	238.6	329.7		91.1
Belle River.....	144.7	148.8	146.8	2.0	
Blenheim.....	345.8	386.0	379.3	6.7	
Blyth.....	91.4	85.8	93.5		7.7
Bolton.....	122.4	118.4	131.7		13.3
Bothwell.....	103.2	97.8	104.5		6.7
Brampton.....	2,018.2	2,116.7	2,345.9		229.2
Brantford.....	10,140.8	9,343.2	9,129.9	213.3	
Brantford Township.....	630.0	542.5	530.8	11.7	
Brigden.....	81.7	86.0	83.3	2.7	
Brussels.....	123.3	136.7	134.4	2.3	
Burford.....	138.6	141.3	143.6		2.3
Burgessville.....	49.2	56.3	55.2	1.1	
Bridgeport.....	153.8	104.0	130.2		26.2
Caledonia.....	323.6	344.5	378.4		33.9
Campbellville.....	27.3	28.1	27.3	0.8	
Cayuga.....	85.1	102.8	96.2	6.6	
Chatham.....	4,637.2	4,188.1	4,167.0	21.1	
Chippawa.....	260.0	270.8	261.4	9.4	
Clifford.....	51.6	64.3	63.0	1.3	
Clinton.....	399.4	415.5	462.4		46.9
Comber.....	147.4	143.1	125.7	17.4	
Courtright.....	49.6	47.5	40.7	6.8	
Cottam.....	59.0	73.7	69.3	4.4	
Dashwood.....	62.6	69.3	69.3		
Delaware.....	36.4	38.8	37.6	1.2	
Dorchester.....	72.2	75.7	81.7		6.0
Drayton.....	86.1	89.0	96.8		7.8
Dresden.....	278.0	291.9	319.0		27.1
Drumbo.....	65.4	53.6	64.2		10.6
Dublin.....	40.2	45.5	48.6		3.1
Dundas.....	1,555.0	1,447.7	1,280.1	167.6	
Dunnville.....	668.9	758.7	786.0		27.3
Dutton.....	210.4	212.6	236.8		24.2
East Windsor.....	3,567.0	3,072.4	2,761.4	311.0	
Elmira.....	1,067.0	760.8	777.5		16.7
Elora.....	401.6	422.2	411.5	10.7	
Embro.....	79.7	81.4	98.5		17.1
Erieau.....	46.2	60.3	61.6		1.3
Erie Beach.....	9.8	16.7	11.1	5.6	
Etobicoke Township†.....	2,942.4	3,345.7	3,159.5	186.2	
Exeter.....	411.5	407.5	404.8	2.7	
Essex.....	337.8	400.8	372.1	28.7	

†Long Branch separated from Etobicoke Twp.

†Barton Twp. absorbed by Saltfleet R.P.D.



## NIAGARA SYSTEM—LOADS OF MUNICIPALITIES, 1929-1930-1931—Continued

Municipality	Peak load in horsepower			Change in load 1930-1931	
	Oct. 1929	Oct. 1930	Oct. 1931	Decrease	Increase
Fergus.....	685.5	729.7	686.3	43.4	.....
Forest.....	269.9	290.8	305.6	.....	14.8
Fonthill.....	123.2	126.7	163.6	.....	36.9
Galt.....	7,089.6	6,854.3	6,301.6	552.7	.....
Georgetown.....	854.7	923.8	889.0	34.8	.....
Glencoe.....	147.4	159.5	173.2	.....	13.7
Goderich.....	1,160.8	1,068.7	983.4	85.3	.....
Granton.....	80.0	47.9	93.4	.....	45.5
Guelph.....	8,154.8	7,423.8	7,794.9	.....	371.1
Hagersville.....	1,214.5	1,136.7	943.7	193.0	.....
Hamilton.....	65,685.8	60,434.8	86,641.1	.....	26,206.3*
Harriston.....	268.1	292.9	311.6	.....	18.7
Harrow.....	300.2	349.8	368.6	.....	18.8
Hensall.....	152.4	146.1	165.5	.....	19.4
Hespeler.....	1,134.6	1,453.1	1,831.4	.....	378.3
Highgate.....	117.3	73.3	59.9	13.4	.....
Humberstone.....	268.1	331.1	384.7	.....	53.6
Ingersoll.....	2,104.6	2,103.3	1,915.9	187.4	.....
Jarvis.....	169.3	172.9	179.9	.....	7.0
Kingsville.....	411.5	451.7	446.4	5.3	.....
Kitchener.....	16,042.8	16,315.3	15,834.7	480.6	.....
Lambeth.....	97.2	107.2	107.2	.....	.....
Leamington.....	1,272.1	1,042.9	1,065.9	.....	23.0
Listowel.....	833.8	855.2	865.3	.....	10.1
London.....	28,337.6	28,954.0	27,908.8	1,045.2	.....
London Township V.A.....	230.2	293.5	311.2	.....	17.7
Lucan.....	175.6	167.1	174.1	.....	7.0
Lynden.....	67.5	85.1	83.1	2.0	.....
LaSalle.....	265.4	237.5	241.3	.....	3.8
Markham.....	155.3	205.0	238.6	.....	33.6
Merlin.....	162.2	174.2	91.8	82.4	.....
Merritton.....	2,300.3	2,603.2	2,281.5	321.7	.....
Milton.....	1,124.4	1,024.4	705.3	319.1	.....
Milverton.....	359.2	343.1	344.5	.....	1.4
Mimico.....	2,010.7	2,013.4	2,103.1	.....	89.7
Mimico Asylum.....	65.0	65.0	65.0	.....	.....
Mitchell.....	393.4	469.1	500.0	.....	30.9
Moorefield.....	54.0	30.8	48.2	.....	17.4
Mount Brydges.....	76.9	80.4	89.0	.....	8.6
Newbury.....	33.5	40.2	41.8	.....	1.6
New Hamburg.....	413.3	492.9	492.3	0.6	.....
Newmarket.....	978.5	1,069.7	1,340.5	.....	270.8
New Toronto.....	5,533.5	5,069.7	5,194.4	.....	124.7
Niagara Falls.....	9,408.8	9,864.6	9,351.2	513.4	.....
Niagara-on-the-Lake.....	525.5	575.1	536.2	38.9	.....
Norwich.....	315.0	321.7	331.7	.....	10.0
Oil Springs.....	180.0	182.4	156.9	25.5	.....
Ontario Agricultural College.....	270.8	320.3	401.6	.....	81.3
Ontario Central Reformatory.....	208.5	229.2	282.8	.....	53.6
Otterville.....	74.1	68.0	83.6	.....	15.6

\*The excessive increase in the Hamilton load is due to absorption of the D.P. & T. component since last year.



## NIAGARA SYSTEM—LOADS OF MUNICIPALITIES, 1929-1930-1931—Continued

Municipality	Peak load in horsepower			Change in load 1930-1931	
	Oct. 1929	Oct. 1930	Oct. 1931	Decrease	Increase
Palmerston . . . . .	438.4	444.9	518.9	.....	74.0
Paris . . . . .	1,267.1	1,305.8	1,242.0	63.8	.....
Parkhill . . . . .	147.4	150.1	140.7	9.4	.....
Petrolia . . . . .	758.2	794.4	731.4	63.0	.....
Plattsville . . . . .	51.7	49.6	60.8	.....	11.2
Point Edward . . . . .	398.1	664.9	267.4	397.5	.....
Port Colborne . . . . .	1,481.2	1,595.2	1,608.6	.....	13.4
Port Credit . . . . .	485.2	591.1	537.5	53.6	.....
Port Dalhousie . . . . .	380.7	423.6	457.1	.....	33.5
Port Dover . . . . .	280.8	296.9	315.2	.....	18.3
Port Rowan . . . . .	59.2	74.4	74.2	0.2	.....
Port Stanley . . . . .	184.9	218.5	220.9	.....	2.4
Preston . . . . .	3,502.7	3,341.8	3,128.6	213.2	.....
Princeton . . . . .	75.0	80.4	101.3	.....	20.9
Queenston . . . . .	85.8	83.1	87.1	.....	4.0
Richmond Hill . . . . .	249.3	257.9	317.3	.....	59.4
Ridgetown . . . . .	461.1	461.1	416.9	44.2	.....
Riverside . . . . .	1,254.7	1,238.3	1,212.7	25.6	.....
Rockwood . . . . .	70.1	107.2	104.5	2.7	.....
Rodney . . . . .	130.6	139.8	145.6	.....	5.8
St. Catharines . . . . .	9,061.9	8,999.2	8,449.7	549.5	.....
St. Clair Beach . . . . .	88.4	80.4	97.6	.....	17.2
St. George . . . . .	143.4	134.0	92.5	41.5	.....
St. Jacobs . . . . .	203.4	246.5	140.2	106.3	.....
St. Marys . . . . .	1,231.9	1,402.1	1,521.9	.....	119.8
St. Thomas . . . . .	5,502.7	5,624.6	5,643.4	.....	18.8
Sarnia . . . . .	6,447.6	6,950.3	6,801.6	148.7	.....
Sandwich . . . . .	3,664.9	3,861.4	3,459.3	402.1	.....
Scarboro Township . . . . .	2,294.8	2,788.2	3,034.8	.....	246.6
Seaforth . . . . .	663.4	466.1	510.9	.....	44.8
Simcoe . . . . .	1,153.3	1,365.1	1,491.1	.....	126.0
Springfield . . . . .	91.1	85.1	52.9	32.2	.....
Stamford Township . . . . .	1,636.0	1,843.2	1,831.1	12.1	.....
Stouffville . . . . .	128.1	155.5	194.7	.....	39.2
Stratford . . . . .	7,120.8	7,760.5	7,790.6	.....	30.1
Strathroy . . . . .	891.2	907.3	1,000.0	.....	92.7
Sutton . . . . .	107.2	144.4	150.4	.....	6.0
Tavistock . . . . .	420.9	431.6	523.6	.....	92.0
Tecumseh . . . . .	444.7	438.3	443.8	.....	5.5
Thamesford . . . . .	142.7	153.5	154.1	.....	0.6
Thamesville . . . . .	210.4	197.8	178.3	19.5	.....
Theford . . . . .	51.3	52.5	60.8	.....	8.3
Thorndale . . . . .	59.0	40.2	46.1	.....	5.9
Thorold . . . . .	1,448.0	2,170.9	1,941.7	229.2	.....
Tilbury . . . . .	514.7	502.7	321.7	181.0	.....
Tillsonburg . . . . .	841.8	811.0	884.7	.....	73.7
Toronto . . . . .	270,628.0	280,280.0	289,262.7	.....	8,982.6
Toronto Township . . . . .	1,268.1	1,612.3	1,668.1	.....	55.8
Walkerville . . . . .	8,729.2	8,256.0	6,348.5	1,907.5	.....
Wallaceburg . . . . .	3,451.7	1,808.3	1,059.0	749.3	.....
Wardsville . . . . .	29.5	32.1	38.0	.....	5.9
Waterdown . . . . .	202.3	246.0	231.9	14.1	.....
Waterford . . . . .	382.0	371.3	380.0	.....	8.7
Waterloo . . . . .	3,203.3	2,814.7	2,946.2	.....	131.5

## NIAGARA SYSTEM—LOADS OF MUNICIPALITIES, 1929-1930-1931—Continued

Municipality	Peak load in horsepower			Change in load 1930-1931	
	Oct. 1929	Oct. 1930	Oct. 1931	Decrease	Increase
Watford.....	171.6	167.5	200.4	.....	32.9
Welland.....	4,248.0	3,848.5	3,967.8	.....	119.3
Wellesley.....	104.6	126.6	142.7	.....	16.1
West Lorne.....	345.8	273.4	97.8	175.6	.....
Weston.....	2,957.1	3,150.1	2,619.2	530.9	.....
Wheatley.....	134.8	142.0	155.7	.....	13.7
Windsor.....	27,712.3	28,087.8	25,431.8	2,656.0	.....
Woodbridge.....	209.1	288.2	293.5	.....	5.3
Woodstock.....	4,977.2	4,879.3	4,781.5	.....	97.8
Wyoming.....	50.6	61.0	60.3	.7	.....
York, East Township.....	4,017.4	4,788.2	5,138.0	.....	349.8
York, North Township.....	1,414.2	2,143.4	2,757.4	.....	614.0
Zurich.....	83.2	92.5	85.9	6.6	.....

## NIAGARA SYSTEM—NEW MUNICIPALITIES

Name	Connected	Load in horsepower		Decrease	Increase
		Initial	Oct. 1931		
Long Branch*.....	Jan. 1st, 1930	614.7	754.1	.....	139.4

\*This load was formerly part of Etobicoke Twp. load.

## NIAGARA SYSTEM—RURAL POWER DISTRICT LOADS, 1929-1930-1931

Rural power district	Peak load in horsepower			Change in load 1930-1931	
	Oct. 1929	Oct. 1930	Oct. 1931	Decrease	Increase
Acton.....	2.0	2.0	10.0	.....	8.0
Ailsa Craig.....	.....	0.8	5.6	.....	4.8
Alvinston.....	1.0	1.6	3.2	.....	1.6
Amherstburg.....	533.1	525.2	518.8	6.4	.....
Aylmer.....	155.3	245.3	304.8	.....	59.5
Ayr.....	16.5	24.5	32.0	.....	7.5
Baden.....	193.1	253.7	293.6	.....	39.9
Beamsville*.....	625.3	915.5	1,072.2	.....	156.7
Belle River.....	261.0	263.2	269.9	.....	6.7
Blenheim.....	134.7	123.1	153.5	.....	30.4
Brant.....	291.4	451.6	565.2	.....	113.6
Bond Lake.....	522.8	715.3	840.7	.....	125.4

## NIAGARA SYSTEM—RURAL POWER DISTRICT LOADS, 1929-1930-1931—Continued

Rural power district	Peak load in horsepower			Change in load 1930-1931	
	Oct. 1929	Oct. 1930	Oct. 1931	Decrease	Increase
Bothwell.....	109.5	124.5	102.7	21.8	.....
Brampton.....	109.1	119.2	127.3	.....	8.1
Brigden.....	27.0	33.2	35.7	.....	2.5
Burford.....	93.5	105.9	145.3	.....	39.4
Caledonia.....	136.7	209.2	205.5	3.7	.....
Chatham.....	411.0	470.1	434.0	36.1	.....
Chippawa.....	99.2	120.6	109.9	10.7	.....
Clinton.....	61.8	90.1	124.6	.....	34.5
Delaware.....	201.1	247.4	297.2	.....	49.8
Dorchester.....	290.8	321.4	335.9	.....	14.5
Dresden.....	3.7	10.0	28.5	.....	18.5
Drumbo.....	36.3	85.9	64.6	21.3	.....
Dundas*.....	415.3	355.6	552.3	.....	196.7
Dunnville.....	4.0	4.0	29.0	.....	25.0
Dutton.....	82.5	100.0	115.7	.....	15.7
Elora.....	43.3	84.0	139.8	.....	55.8
Elmira.....	24.1	40.8	72.7	.....	31.9
Essex.....	214.9	209.5	213.9	.....	4.4
Exeter.....	160.0	194.4	217.6	.....	23.2
Forest.....	6.3	16.3	28.0	.....	11.7
Galt.....	131.4	154.7	179.6	.....	24.9
Georgetown.....	47.4	123.1	132.4	.....	9.3
Goderich.....	42.9	65.0	71.5	.....	6.5
Grantham*.....	434.1	479.6	643.2	.....	163.6
Guelph.....	115.5	348.5	392.1	.....	43.6
Haldimand.....	40.0	228.2	193.2	35.0	.....
Harrow.....	205.2	349.8	399.4	.....	49.6
Harriston.....	3.0	4.8	22.1	.....	17.3
Ingersoll.....	361.0	303.2	370.6	.....	67.4
Jordan.....	207.5	294.6	200.0	94.6	.....
Keswick.....	151.4	209.5	291.1	.....	81.6
Kingsville.....	402.3	545.3	526.6	18.7	.....
Listowel.....	63.5	96.5	113.9	.....	17.4
London.....	1,222.6	1,420.3	1,451.8	.....	31.5
Lucan.....	41.9	66.5	65.3	1.2	.....
Lynden.....	101.6	143.0	160.0	.....	17.0
Markham.....	208.42	296.2	387.7	.....	91.5
Merlin.....	84.1	144.7	157.5	.....	12.8
Milton.....	105.1	99.8	124.8	.....	25.0
Milverton.....	36.8	45.5	74.5	.....	29.0
Mitchell.....	123.6	161.0	190.4	.....	29.4
Newmarket.....	207.3	213.8	290.3	.....	76.5
Niagara.....	523.0	504.5	598.9	.....	94.4
Norwich.....	198.4	202.0	207.7	.....	5.7
Oil Springs.....	38.5	37.1	45.5	.....	8.4



## NIAGARA SYSTEM—RURAL POWER DISTRICT LOADS, 1929-1930-1931—Continued

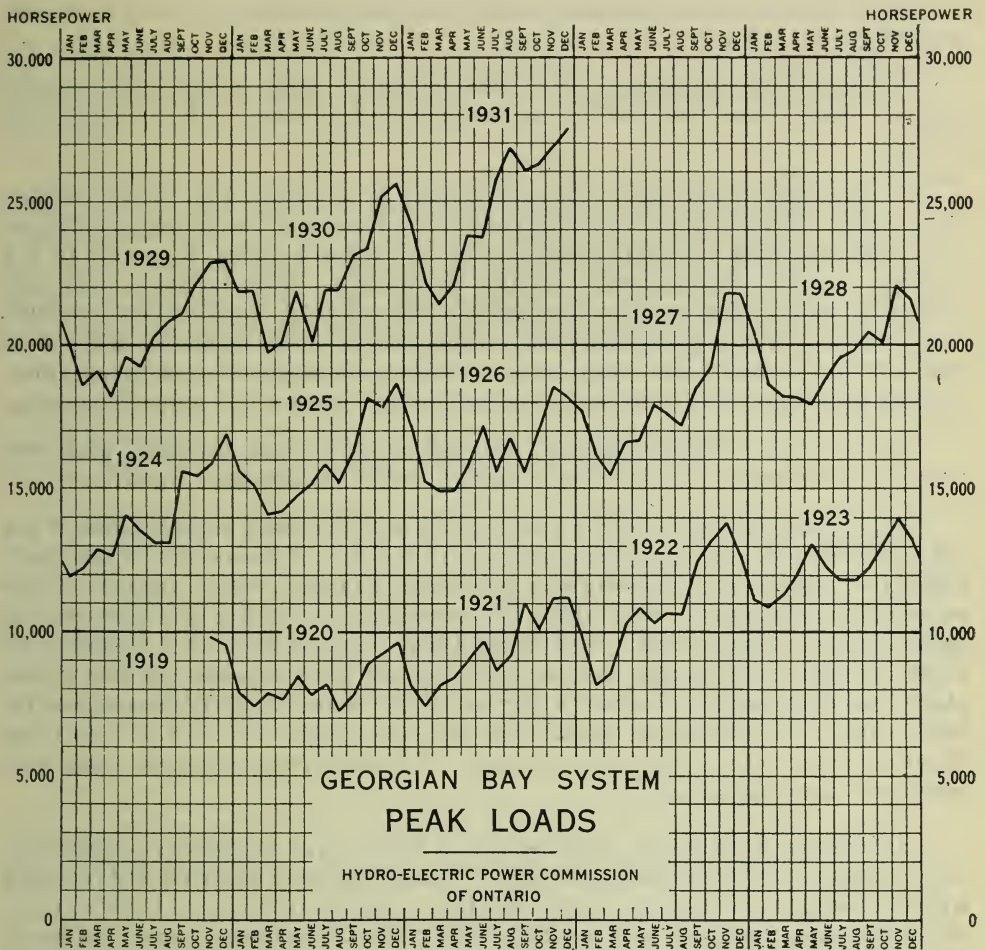
Rural power district	Peak load in horsepower			Change in load 1930-1931	
	Oct., 1929	Oct., 1930	Oct., 1931	Decrease	Increase
Palmerston.....	3.8	4.0	31.5	.....	27.5
Petrolia.....	5.3	27.0	25.3	1.7	.....
Preston.....	607.7	770.4	848.1	.....	77.7
Ridgetown.....	255.3	328.7	284.2	44.5	.....
Saltfleet*.....	522.2	663.8	1,114.6	.....	450.8
Sandwich.....	1,022.4	1,060.9	1,008.3	52.6	.....
Sarnia.....	435.6	427.7	491.1	.....	63.4
Scarboro.....	205.0	285.5	315.0	.....	29.5
Seaforth.....	23.7	36.5	46.3	.....	9.8
Stratford.....	136.2	167.8	176.1	.....	8.3
St. Jacobs.....	165.1	238.7	241.9	.....	3.2
St. Marys.....	142.7	185.7	243.6	.....	57.9
St. Thomas.....	391.4	460.6	465.0	.....	4.4
Simcoe.....	122.0	155.5	175.0	.....	19.5
Stamford.....	161.6	174.9	193.0	.....	18.1
Strathroy.....	31.9	37.2	96.6	.....	59.4
Streetsville.....	274.0	342.5	376.2	.....	33.7
Tavistock.....	110.2	141.1	165.7	.....	24.6
Thamesville.....	67.0	97.7	105.9	.....	8.2
Tilbury.....	38.6	67.3	78.1	.....	10.8
Tillsonburg.....	239.0	279.9	321.3	.....	41.4
Wallaceburg.....	137.6	114.7	180.5	.....	65.8
Walsingham.....	45.8	76.8	128.7	.....	51.9
Walton.....	70.7	66.7	84.5	.....	17.8
Waterford.....	75.6	119.0	129.2	.....	10.2
Waterdown*.....	389.3	491.2	830.5	.....	339.3
Watford.....	.....	11.5	17.6	.....	6.1
Welland.....	1,218.6	1,095.2	1,115.3	.....	20.1
Woodbridge.....	559.8	538.3	561.9	.....	23.6
Woodstock.....	394.3	501.1	480.6	20.5	.....

Note:—Beamsville, Dundas, Grantham, Saltfleet and Waterdown rural power districts show a large increase due to the inclusion of 66 cycle Dominion Power and Transmission system loads.

### GEORGIAN BAY SYSTEM

The Georgian Bay system peak shows an increase of fourteen per cent over last year, and the average load shows an increase of six per cent. Approximately two-thirds of this increase is due to the inclusion this year of Bala and Bruce district loads, for which no figures were available last year as the necessary meters had not been installed.

The town of Barrie changed its distributing system from two-phase to three-phase during the year, and the load is now carried altogether on the 3,000-kv-a. three-phase bank of transformers which was installed last year.



NOTE:—The Georgian Bay system includes the Severn, Eugenia, Wasdells, Muskoka and Bala districts. In the diagram the load for the Muskoka district is not included until November, 1924. Details respecting this load for preceding years are given in earlier Annual Reports. The load of the new district at Bala is not included in above graph until April, 1931, previous meter records being incomplete.

The two 700-kv-a. transformer banks, formerly connected for three-phase to two-phase transformation, were removed from service. A spare 1,000-kv-a. transformer was purchased and shipped to Barrie to safeguard the service in case of a failure in one transformer of the 3,000-kv-a. bank.

At Stayner the transformer capacity was increased from 300 kv-a. to 750 kv-a. and the Stayner low tension bus voltage increased from 4,000 volts to 8,000 volts. A bank of three 75-kv-a. transformers, formerly used as a step-up bank on Wasaga Beach feeder, was moved to Stayner distributing station to step down the bus voltage to 4,000 volts for Stayner distribution, while Wasaga Beach and Creemore feeders (both now operating at 8,000 volts) are fed directly off Stayner distributing station low-tension bus.

At Midhurst distributing station transformer capacity was increased from 75 kv-a. to 300 kv-a. and low-tension voltage was raised from 4,000 to 8,000 volts.

At Fergusonvale distributing station, transformer capacity was increased from 50 kv-a. to 100 kv-a.

At Big Chute equipment for a new domestic water supply and sewage disposal system was installed to serve the boarding-house and the operators' cottages.

At the Big Chute plant, extensive repairs were carried out to the forebay canal walls. Defects have been progressive for a few years, and as load conditions permitted removing the plant from service on Sundays during a portion of the summer of 1931, the necessary repairs were made. The forebay canal was unwatered and blanket walls poured inside of the old walls in places where defects had occurred, patching was also done on the outside of the walls, toe walls were built on the inside of the canal where the concrete joins the rock foundation, and the portions of the canal walls formed by rock were given a gunite coating.

In the Severn district nineteen airbreak-switches were equipped with new operating mechanisms to improve operation under ice and sleet conditions.

The tie line between the Big Chute plant and the Swift Rapids plant of the town of Orillia was given special attention in the way of maintenance this year. Defective cross-arms, insulators and poles were changed, ninety degree corners were rebuilt, extra guys were added for strengthening the line and new ground cable supports were erected. The right-of-way was also cleared of underbrush. Underbrushing and clearing was also done on the lines between the Big Chute plant and Waubaushene and on a portion of the South Falls-Waubushene tie line. Special maintenance work was also performed on No. 1 line from Waubaushene to Big Chute power house. All defective cross-arms, poles and insulators were replaced.

At Eugenia Falls power house the No. 3 turbine was completely overhauled. New cheek plates were installed, and the bronze gates were removed and replaced with the original steel gates, which had been shipped to Niagara Falls to have the worn parts built up with nickel steel at the Commission's machine shop. Slight defects on the surface of the gate shafts were turned off and new bushings made to accommodate the smaller diameter of the gate shafts. The turbine runner was also shipped to Niagara Falls to have eroded sections of the buckets built up by welding and then machined. Erosion on the various turbine parts at this plant is quite severe owing to the high head and consequent high water pressure.

The No. 1 turbine at this plant was also overhauled. The gates were built up by welding and new cheek plates, peripheral rings and wearing rings were installed to improve clearances and prevent leakage of water around the periphery of the runner into the draft tube.

A failure occurred in the winding of the 1,500-kv-a. synchronous motor used as a condenser at Eugenia power house, resulting in damage to sixteen coils by fire. The damaged coils were replaced with new coils.

At Owen Sound distributing station, a failure occurred in one of the 500-kv-a. transformers, necessitating the return of this transformer to the factory for repairs. A complete new winding of more modern design was installed in this transformer.



Wroxeter rural power district step-up transformer station was changed from single-phase to three-phase by the addition of two 75-kv-a. transformers early in November, 1930. The total transformer capacity of the station is now 225 kv-a., and service to Wroxeter rural power district is three-phase, 8,000-volts.

At Holyrood distribution station during two successive violent lightning storms, in July, two 300-kv-a. three-phase transformers were burnt out. One of these transformers was returned to the factory for repairs, and the other was repaired by the Commission's staff at Davenport transformer station in Toronto. During the first storm a direct lightning stroke hit the distributing station doing considerable damage inside the station as well as damage to the transformer.

The Hanover frequency-changer station was operated continuously throughout the year as it was required both for peak and average loads owing to machines being out of service for repairs at several of the hydro-electric plants and also owing to very low water in the storage reservoirs.

A dynamic braking system was installed on the Hanover frequency-changer set during the year. During the brake tests trouble developed on the starting winding of the 25-cycle motor which necessitated taking the set out of service while repairs were effected by welding. After the repairs to the starting winding were finished, the machines were kept out of service for a further period while various construction details were completed, such as the cleaning and painting of windings, and rewedging of armature coils on the 60-cycle generator. The machines were out of service approximately two weeks for the above mentioned repairs.

When it was ascertained that the Hanover frequency-changer set had to be taken out of service, arrangements were made to reconnect the windings in the machines at Hanover hydraulic plant from 2,300-volt delta to 4,000-volt star so that the power generated at this station could be fed on to the Hanover sub-station low-tension bus, which operates at 4,000-volts, without having to step up the voltage through a bank of transformers. This small plant had been shut down all year owing to the fact that the transformer which formerly stepped the voltage up to 22,000-volts for paralleling with the remainder of the system, had been taken to Walkerton plant for a tie line connection at the end of the fiscal year 1930. This plant, after the change in connections, was placed in service on October 7, and the Hanover frequency-changer set was closed down for repairs on the same date. It was deemed necessary to have the small Hanover plant in service at this time to assist in carrying the system peak load and for conservation of water, and the object in reconnecting the machines was two-fold, namely, to obviate the necessity of installing a bank of transformers, and also, by feeding directly onto the Hanover sub-station low-tension bus, to relieve the overload on the step-down transformer bank at this station.

Two additional 750-kv-a., 25-cycle transformers were installed at Hanover frequency-changer station, making nine of these 750-kv-a. units in all. Oil-breakers were installed on the outgoing 22,000-volt feeders to Chesley and Kincardine, replacing airbreak switches and fuses. To improve ventilation of the machines and building, air-guide vanes were installed around the frames of both machines to prevent the mixing of the discharged hot air with the incoming cool air.

At the time the properties of the Public Utilities Consolidated Corporation were purchased in September, 1930, there was an 11,400-volt tie line between the Walkerton generating station and Southampton generating station. One 6,600-volt, 200-kv-a. machine at Southampton plant in parallel with the Sauble Falls plant, supplied Wiarton, Hepworth and Sauble Beach, and the remaining machine at Southampton along with a Diesel-engine generating set, were, operating in parallel with Walkerton plant to carry Walkerton, Cargill, Pinkerton, Chepstow, some rural consumers and Port Elgin (Southampton having been carried on the Commission's system since July, 1930).

As mentioned in the last Annual Report, immediate steps were taken to allow the removal of the Diesel engine by its owners and to provide service for Port Elgin. A step-up transformer station, of 225-kv-a. capacity, was erected on the low-tension side of Southampton distributing station to provide 6,600-volt, three-phase power for the line to Port Elgin and a short tie line with a three-phase transformer was erected to tie in the Walkerton plant with the Commission's Georgian Bay system. Following this, a 22,000-volt line was constructed from Southampton junction to Southampton power house, and a step-down transformer bank of 450-kv-a. capacity was installed at this plant to protect service to Wiarton, Hepworth and Sauble Beach. The old 11,400-volt tie line between Walkerton and Southampton was then disconnected from Southampton.

Extensive reconstruction was undertaken in this district. A 22,000-volt line was built between Southampton junction and Port Elgin, and a new outdoor distributing station of 300-kv-a. capacity erected in Port Elgin and placed in service June 21, 1931. A 22,000-volt line was constructed from Derby Mills junction, just east of Tara, to Wiarton, and new outdoor distributing stations erected at Wiarton and Hepworth. The new Wiarton station is of 450-kv-a. capacity and was placed in service July 31, 1931. Hepworth station of 100-kv-a. capacity, serves Hepworth village and Sauble rural power district and was placed in service August 13, 1931, at which time Sauble Falls plant was shut down and the old lines between Southampton power house and Tolmie junction, also between Sauble Falls and Wiarton, were removed from service.

A 22,000-volt line was strung from Chesley to Paisley, replacing the former 4,000-volt line, and a new 150-kv-a. outdoor transformer station erected at Paisley. This station was placed in service September 20, and serves Paisley as well as Chepstow, Pinkerton, Cargill and rural consumers which were formerly all fed through the Walkerton transformer station.

In the Eugenia district, due to new road locations at numerous points, it was necessary to move a great number of poles to conform with the new locations, this formed the major part of the work carried out by the Eugenia district line maintenance gang in this fiscal year. During a windstorm of hurricane proportions in June, forty-one poles were blown down on the 22,000-volt line between Durham and Hanover. All available maintenance men as well as several temporary men were rushed to the job, and both circuits of this line were completely back in service three days later. It was necessary to erect eight new poles, and the remainder were lowered as they had been broken off at the ground line.

To improve telephone communication between Eugenia generating station and Markdale office, No. 9 copper conductor was strung replacing the old No. 9



iron wire. Co-operation was given to the Bell Telephone Company in the Eugenia district in an effort to determine the causes of noise on the telephone company's circuits.

At the Wasdells Falls plant, repairs to the concrete in the sluices and piers of the dam, which were under way last year, were completed early in the present fiscal year.

At Wasdells power house, on the out-going feeder to Sparrow Lake rural power district an oil circuit-breaker was installed, replacing expulsion type fuses.

On the Muskoka-Wasdells tie line three 33,000-volt, 50 ampere surge absorbers were installed at Wasdells auto-transformer station, replacing lightning arresters.

At Beaverton distributing station the transformer capacity was increased from 300 kv-a. to 600 kv-a.

At Bala No. 2 plant, owing to the defective condition of the draft tube which had given trouble since the Bala plants were purchased by the Commission, it was decided to install a new draft tube foundation ring and curb ring. This work was completed early in the year and has given entire satisfaction.

At the Bala No. 1 and No. 2 plants extensive changes were made during the year, involving the construction of a new low tension bus in No. 1 plant and changes in the outgoing and incoming feeders to give a more compact and safer arrangement of equipment; the installation of necessary meters for measuring output of both plants and the power supplied to or received from the Big Chute tie line and the power supplied to each of the outgoing feeders; the installation of a control cable and the necessary equipment between No. 1 and No. 2 plants so that No. 2 plant can be remotely controlled from No. 1 plant in so far as voltage and speed adjustments are concerned; and the installation of necessary equipment for synchronizing the unit at No. 2 plant on the bus at No. 1 plant.

Bucking transformers were installed at Bala distributing station on the Big Chute tie line to buck the voltage so that Bala plants can be successfully paralleled with the Big Chute plant and the rest of the Georgian Bay system.

Two blades were broken in the turbine runner at Bala No. 2 plant on March 22nd, and as the prices quoted on a new runner seemed rather high it was decided to attempt repairs by welding. This work was carried out and has apparently been satisfactory.

Trouble developed in the transformers on Port Carling feeder at Bala power house in August. The transformer capacity on this feeder at the time was 157.5 kv-a., and as the only transformers available for replacement were three 150-kv-a. transformers at Southampton power house, it was considered advisable to rush the whole three to Bala and install them so there would be ample capacity to take care of growth in load on this feeder for some time to come.

In order to safeguard the supply of power to the Wasdells district during tie-line faults, switches were installed north and south of the Wasdells tie line tap on the Muskoka-Waubauskene tie line.

At South Falls generating station, the No. 2 wood-stave pipe line was replaced by a new pipe of the same diameter, using treated staves which should



result in a longer life for the new pipe line. The deck of the dam at this station was rebuilt, using new timber throughout. Two new runners were installed in the No. 3, 2,200-horsepower double-runner horizontal turbine to replace defective runners.

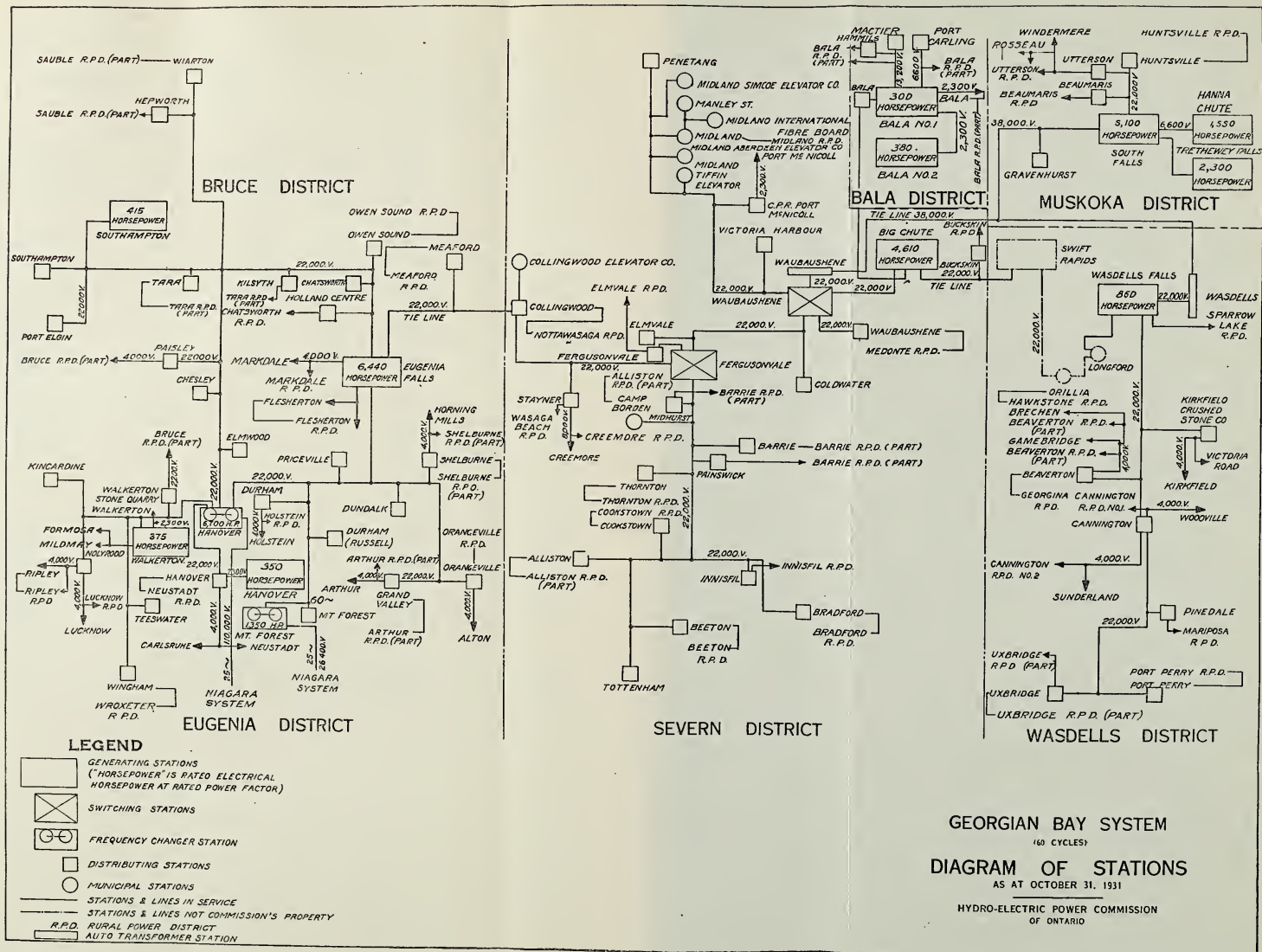
The inspection of Trethewey Falls and Hanna Chute units showed them to be in excellent condition and requiring very little mechanical maintenance work.

The Huntsville sub-station roof was completely remodelled. At Beaumaris distributing station transformer capacity was increased from 150 to 450 kv-a. to meet the increasing demand for power.

At Hollow Lake dam, a concrete facing was built on the upstream side. This dam is now in excellent condition.

#### GEORGIAN BAY SYSTEM—LOADS OF MUNICIPALITIES, 1929-1930-1931

Municipality	Peak load in horsepower			Change in load 1930-1931	
	Oct. 1929	Oct. 1930	Oct. 1931	Decrease	Increase
Alliston.....	183.6	221.9	119.6	22.3	.....
Arthur.....	116.6	121.1	130.7	.....	9.6
Barrie.....	1,978.4	2,285.6	2,503.4	.....	217.8
Beaverton.....	229.2	269.4	295.6	.....	26.2
Beeton.....	117.9	119.8	134.7	.....	14.9
Bradford.....	133.5	135.3	138.2	.....	2.9
Brechin.....	50.9	52.0	59.0	.....	7.0
Camp Borden.....	200.0	321.7	290.0	31.7	.....
Cannington.....	152.8	172.9	155.5	17.4	.....
Carlsruhe and Neustadt.....	30.0	41.5	33.5	8.0	.....
Chatsworth.....	49.6	52.2	51.7	0.5	.....
Chesley.....	412.8	428.9	406.9	22.0	.....
Coldwater.....	274.8	277.5	290.9	.....	13.4
Collingwood.....	1,613.9	1,506.8	1,458.3	48.5	.....
Cookstown.....	48.5	63.5	52.5	11.0	.....
Creemore.....	116.6	101.9	107.2	.....	5.3
Dundalk.....	136.7	140.7	145.1	.....	4.4
Durham.....	583.1	601.9	627.3	.....	25.4
Elmvale.....	148.8	160.8	145.4	15.4	.....
Elmwood.....	44.2	52.2	63.8	.....	11.6
Flesherton.....	82.6	101.6	87.0	14.6	.....
Grand Valley.....	110.7	99.2	121.1	.....	21.9
Gravenhurst.....	565.7	553.0	622.0	.....	69.0
Hanover.....	960.2	1,136.7	1002.7	134.0	.....
Holstein.....	17.0	17.0	20.9	.....	3.9
Hornings Mills.....	8.0	8.0	8.0	.....	.....
Huntsville.....	965.1	963.8	1,023.5	.....	59.7
Kincardine.....	423.6	449.0	434.8	14.2	.....
Kirkfield.....	33.5	35.1	31.0	4.1	.....
Lucknow.....	197.6	229.2	222.5	6.7	.....
Markdale.....	150.9	139.9	163.3	.....	23.4
Meaford.....	361.9	368.6	431.6	.....	63.0
Midland.....	3,559.0	3,115.2	2,723.7	391.5	.....
Mount Forest.....	312.3	384.7	358.4	26.3	.....
Muskoka Twp.....	18.7	20.7	32.1	.....	11.4







## GEORGIAN BAY SYSTEM—NEW MUNICIPALITIES

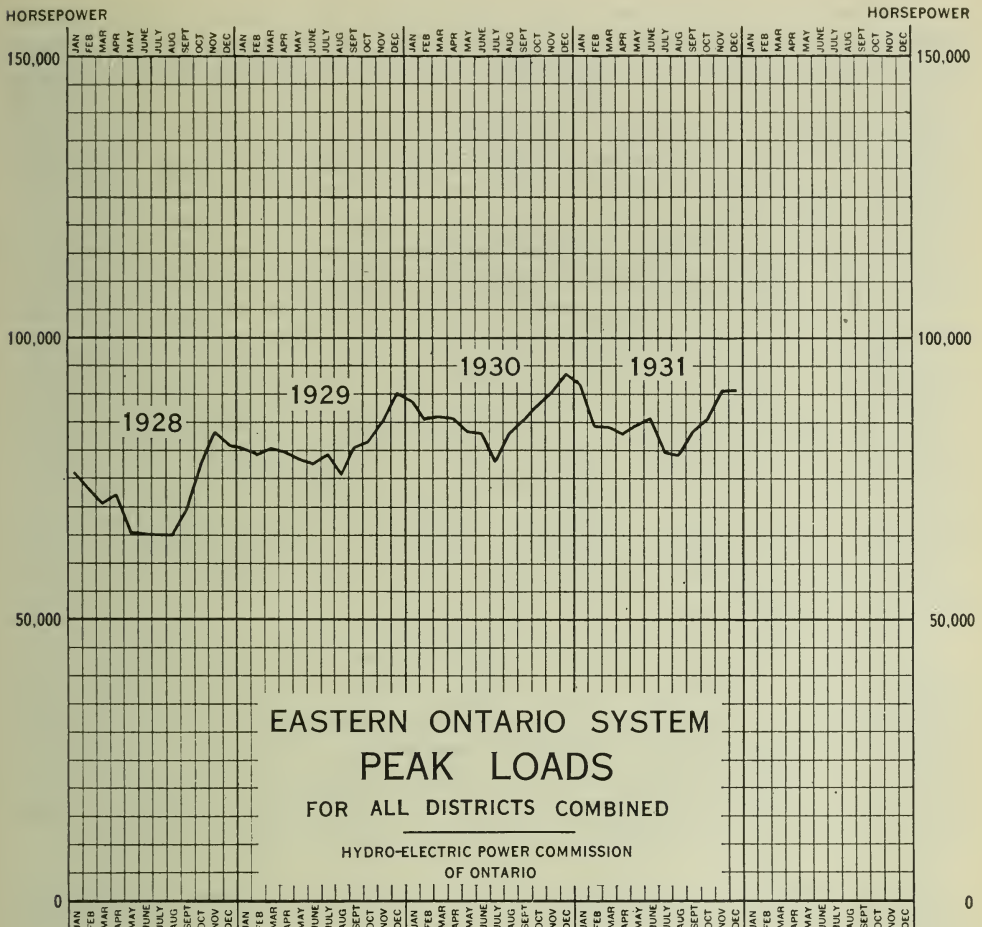
Municipality	Date connected	Load in horsepower		Change in load	
		Initial	Oct. 1931	Decrease	Increase
Orangeville.....	522.3	576.7	550.3	26.4	
Owen Sound.....	3,311.0	3,183.6	3,202.4		18.8
Paisley.....	118.6	138.0	113.1	24.9	
Penetanguishene.....	587.9	605.9	552.3	53.6	
Port McNicoll.....	84.4	88.4	99.0		10.6
Port Perry.....	171.5	240.4	211.9	28.5	
Priceville.....	14.2	15.4	15.7		0.3
Ripley.....	52.9	55.6	55.4	0.2	
Shelburne.....	198.7	233.7	235.8		2.1
Stayner.....	104.0	140.8	193.7		52.9
Sunderland.....	53.6	63.0	59.0	4.0	
Tara.....	59.3	72.7	84.1		11.4
Teeswater.....	81.7	116.0	134.8		18.8
Thornton.....	26.8	23.6	23.4	0.2	
Tottenham.....	70.2	76.8	55.7	21.1	
Uxbridge.....	146.2	180.9	199.8		18.9
Victoria Harbour.....	73.7	71.0	64.3	6.7	
Victoria Road.....	10.0	11.4	10.3	1.1	
Waubaushehene.....	37.2	40.9	52.9		12.0
Windermere.....		26.8	25.0	1.8	
Wingham.....	422.2	392.2	304.6	87.6	
Woodville.....	48.0	55.0	65.1		10.1
Bala.....	Nov. 1, 1930	80	121.0		41.0
Formosa.....	Nov. 1, 1930	37	45.0		8.0
Hepworth.....	Nov. 1, 1930	15	24.1		9.1
Mildmay.....	Nov. 1, 1930	67.1	63.1	4.0	
McTier.....	Nov. 1, 1930	130.0	148.0		18.0
Port Carling.....	Nov. 1, 1930	75.0	126.0		51.0
Port Elgin.....	Nov. 1, 1930	23.85	195.7	87.8	
Rosseau.....	July 11, 1931	30.0	30.0		
Southampton.....	Nov. 1, 1930	272.1	233.2	38.9	
Walkerton.....	Nov. 1, 1930	475.0	492.2		17.2
Warton.....	Nov. 1, 1930	200.0	238.3		38.3

## GEORGIAN BAY SYSTEM—RURAL POWER DISTRICT LOADS, 1929-1930-1931

Rural power district	Peak load in horsepower			Change in load 1930-1931	
	Oct. 1929	Oct. 1930	Oct. 1931	Decrease	Increase
Alliston.....		74.2	92.2		18.0
Arthur.....		1.2	3.2		2.0
Barrie.....	61.8	159.3	196.3		37.0
Beaumaris.....	50.9	87.1	83.1	4.0	
Beaverton.....		1.0	5.0		4.0
Bradford.....	4.3	5.4	20.0		14.6
Buckskin.....	17.4	17.7	12.0	5.7	
Cannington No. 1.....	19.0	19.0	18.0	1.0	
Cannington No. 2.....	28.8	21.7	23.5		1.8
Chatsworth.....	10.7	11.4	9.8	1.6	
Elmvale.....	14.4	46.2	63.2		17.0
Flesherton.....	3.8	5.7	5.5	0.2	
Georgina.....	33.5	36.2	42.2		6.0
Hawkestone.....		45.1	56.3		11.2
Innisfil.....	54.9	65.0	135.4		70.4
Mariposa.....	101.8	131.3	151.4		20.1
Markdale.....	0.5	1.6	2.0		0.4
Medonte.....		2.0	11.0		9.0
Nottawasaga.....	29.6	32.1	29.6	2.5	
Orangeville.....	16.3	27.8	35.5		7.7
Port Perry.....	64.0	78.6	103.1		24.5
Shelburne.....	4.3	4.9	9.6		4.7
Sparrow Lake.....	56.9	67.0	98.4		31.4
Tara.....	28.7	54.8	45.7	9.1	
Thornton.....		13.4	12.0	1.4	
Utterson.....		9.4	24.0		14.6
Uxbridge.....	34.4	85.8	102.5		16.7
Wasaga.....	43.4	45.5	76.0		30.5
Wroxeter.....	36.2	47.5	104.2		56.7

## GEORGIAN BAY SYSTEM—NEW RURAL POWER DISTRICTS

Rural power district	Date connected	Load in horsepower		Change in load	
		Initial	Oct. 1931	Decrease	Increase
Bruce.....	Oct. 1, 1931		50.3		
Cookstown.....	Dec. 11, 1930	0.8	0.8		
Creemore.....	Dec. 5, 1930	21.0	20.1	0.9	
Huntsville.....	July 25, 1931	59.6	14.0	45.6	
Midland.....	Nov. 1, 1930	12.0	14.0		2.0
Owen Sound.....	Feb. 20, 1931	5.0	8.0		3.0
Sauble.....	Oct. 1, 1931		8.0		



### EASTERN ONTARIO SYSTEM

The load on the Eastern Ontario system has been remarkably well sustained throughout the past fiscal year, the maximum demand having shown an increase of approximately four per cent over the previous year, in spite of the prevailing depression in business and industrial activities. The load in the Ottawa, St. Lawrence and Rideau districts has, with a slight exception during January in the Rideau district, maintained a consistently higher level than in 1930, while in the Central Ontario district load conditions have been somewhat irregular, showing a slight increase in certain months and a slight decrease in others. However, considering the large amount of industrial load in proportion to the total load in this district, it is very gratifying to note that the increase in domestic load has been sufficiently high to offset to so great an extent the reduction in industrial load and maintain a demand comparing very favourably with the previous year. The load in the Madawaska district showed a large increase during the earlier months of the fiscal year and then indicated a downward tendency towards the end of the fiscal year, which was largely due to the reduced demand for power for construction purposes at the Chats Falls development.



Stream flow in the Trent river, from which the Central Ontario district obtains the greater part of its power supply, was for some time much below normal and for a period the flow was lower than it has ever been since the Commission took over the operation of this district in March, 1916. The cause will be readily apparent on referring to the graph representing rainfall on the Trent watershed. The period of subnormal rainfall began with June, 1930, and continued without interruption for a period of thirteen months until July, 1931. This dry period did not create any important reduction in stream flow until toward the end of 1930, but, as there had been no replenishment of storage or ground water before the freeze-up, stream flow remained unseasonably low all winter. Following this, precipitation was slight and the spring freshet flow abnormally low, resulting in the Trent System storage being very much below normal at the end of the month of May, at which time it is usually at its maximum. It therefore became necessary to guard against the possibility of a power shortage in the Central Ontario district. The most feasible way of obtaining additional power was from the Gatineau supply, and this required additional transformer capacity. Accordingly plans were made and work started immediately on the construction of a new 15,000-kv-a., 110,000-volt transformer station near Kingston. Three 5,000-kv-a. transformers and the regulating transformer were transferred from Smiths Falls high-tension transformer station, and the new station was placed in service on July 12.

The line extending between Smiths Falls and Kingston, while it was constructed for 110,000-volt operation, was formerly operated at 44,000 volts and fed power directly into the Central Ontario District high-tension line network at the Kingston high-tension switching station. After the change, power was fed at 110,000-volts over this line to the new station and stepped down at that point to 44,000 volts for supply to the Central Ontario district, thereby reducing transmission losses and improving voltage and operating stability.

The 5,000-kv.a. transformers which were removed from Smiths Falls transformer station, were replaced by a three-phase bank made up by using the spare 5,000-kv-a. transformer for one phase, and two 1,250-kv-a. transformers connected in parallel on each of the other two phases, giving a capacity of 7,500-kv-a.

Early in September owing to decreasing stream flow and increasing load, not only on the Central Ontario district but on other parts of the system, it became necessary to order an additional supply of 4,000 horsepower from the Gatineau Power Company. This was increased by 2,000 horsepower on September 14, making a total of 6,000 horsepower, the full block due in accordance with the terms of the contract on October 1. The system load, however, continued to increase and this, together with a further reduction in stream flow, made it necessary to further augment the system power supply. Accordingly, arrangements were made with the Cedars Rapids Transmission Company for a temporary supply of 3,000 horsepower for one month. During this period stream flow conditions improved in the Trent river, and the above temporary supply was discontinued on October 17.

During the above period such power as became available during the hours when load was light, was supplied to the Rideau district in order to conserve in storage at High Falls as much water as possible. This water then became

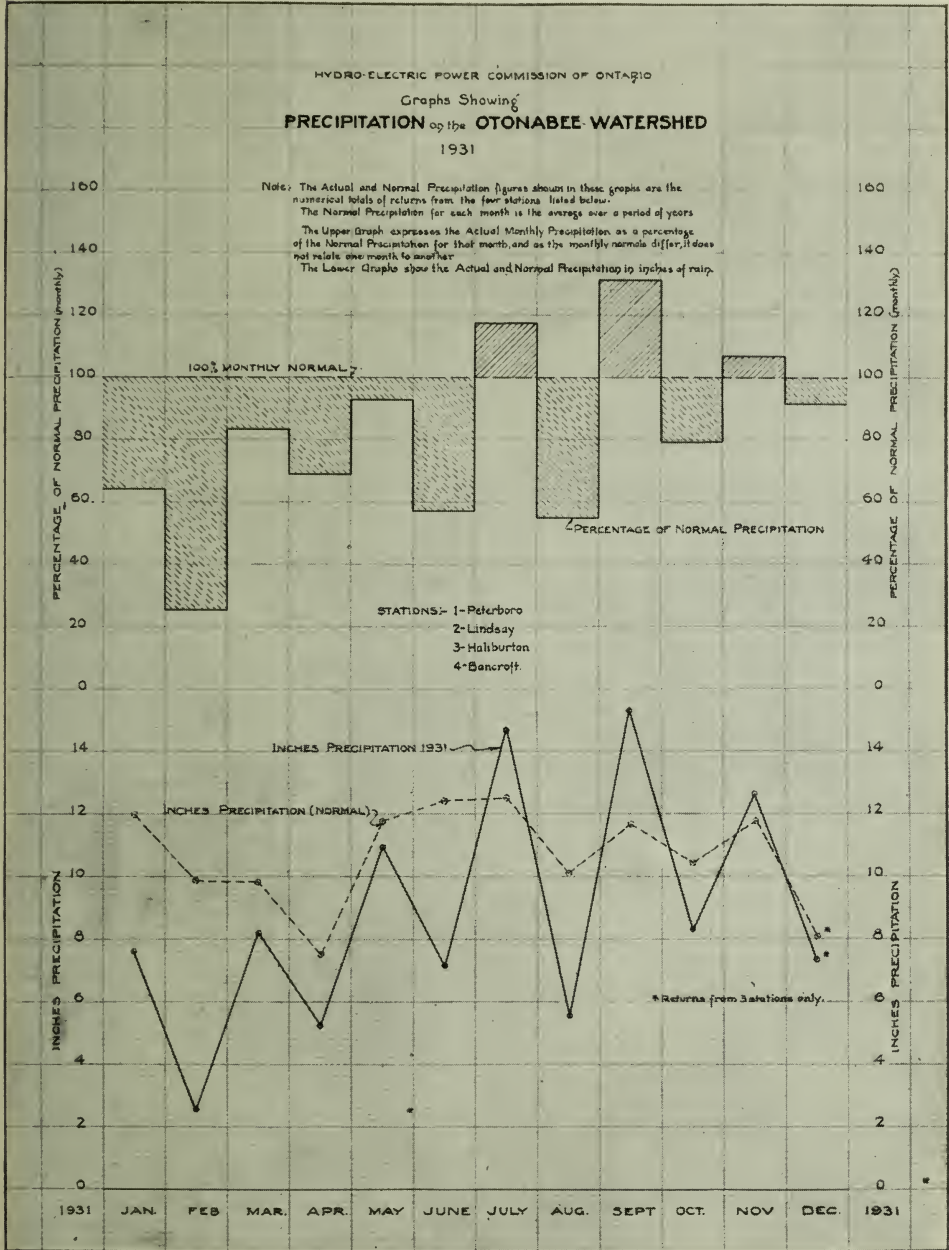
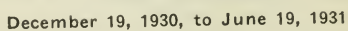


PLATE A—PRECIPITATION DATA—1931

The upper graph represents the estimated actual monthly precipitation on the Otonabee watershed expressed as a percentage of the normal precipitation.  
The estimate is based upon the actual and normal return of the Meteorological Service for Peterboro, Lindsay, Bancroft and Haliburton.  
Although the numerical values differ from month to month the normal precipitation is taken as 100 per cent, hence the solidly hatched areas represent the amount by which the precipitation exceeded the average while the dotted hatched area represents in a similar manner the deficiencies.  
The lower graph shows the actual and normal precipitation in inches of rain.



GRAPH No. 2—Weekly average power equivalent of total flow at all dams, exclusive of 12 and 17. This equals the weekly average load supplied by H.E.P.C. plants only, plus the power equivalent of the weekly average wastage at these plants. This wastage is shown by the dotted hatched area between curves 2 and 1a.



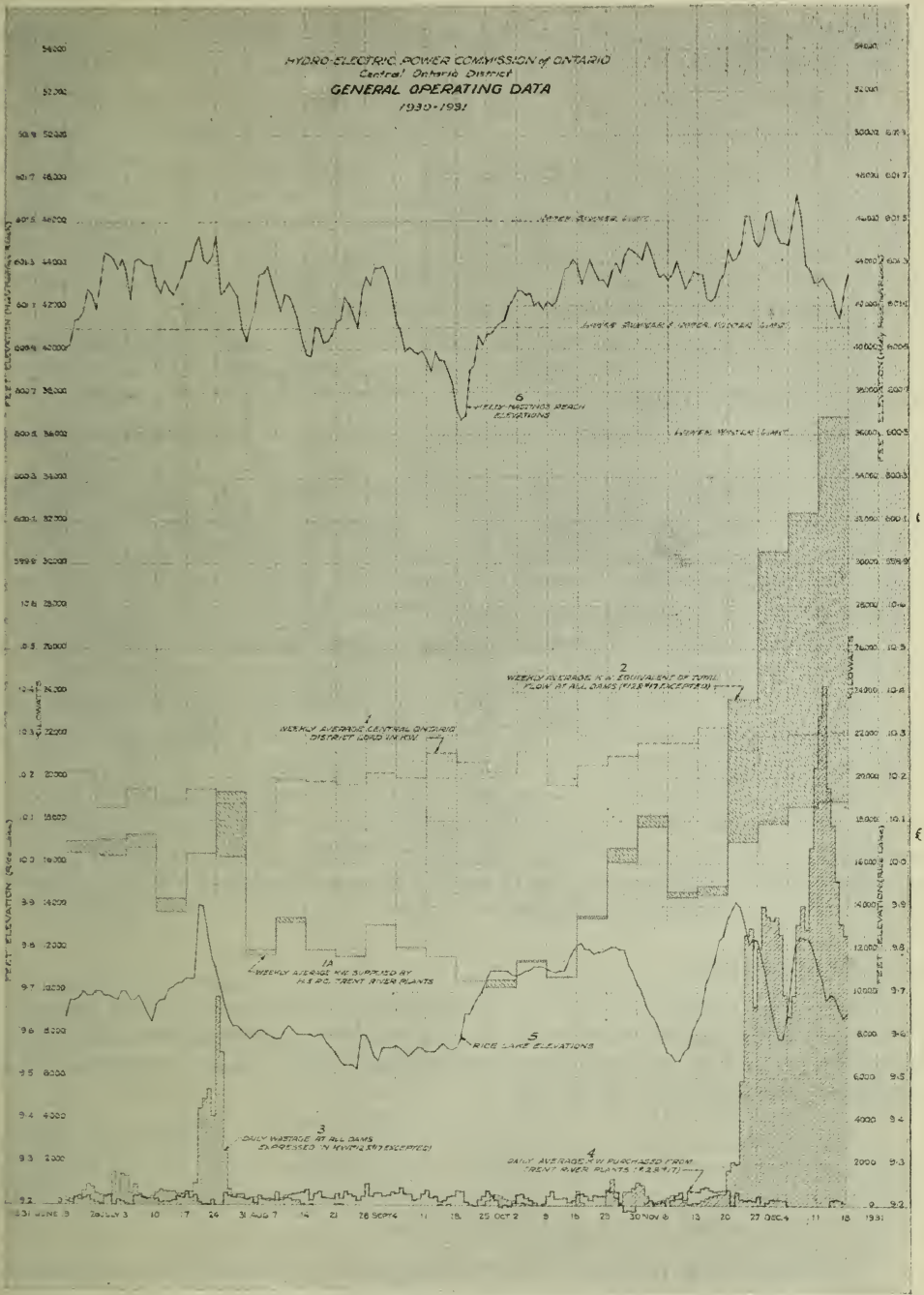


PLATE B2—GENERAL OPERATING DATA

June 19, 1931 to December 18, 1931

- GRAPH No. 3—Average daily wasteage expressed in kilowatts at all dams, exclusive of dams 12 and 17. In the weekly aggregate the area under this graph equals the wastage represented by the hatched area between curves 2 and 1a.
- GRAPH No. 4—Average daily power purchased from plants 12 and 17 in kilowatts.
- GRAPH No. 5—Midnight elevations of Rice lake.
- GRAPH No. 6—Midnight elevations of Heely-Hastings reach.

available for generation of power during the most critical periods on other parts of the system.

In the Madawaska district the effects of the very dry summer of 1930 caused a serious depletion of storage in the Madawaska watershed in the early part of December, 1930. As noted in the previous issue of this Report, there is as yet no physical connection between this district and the rest of the system. However, satisfactory arrangements were made with the Gatineau Power company for a temporary supply of approximately 1,000 horsepower. This power was fed into the 33,000-volt line near Fitzroy Harbor through a temporary transformer station which was built on Victoria Island.

From the foregoing synopsis of operation it will readily be evident that a serious power shortage undoubtedly would have been experienced had Gatineau power not been available.

During the year the usual program of station and line maintenance work was carried out.

At Ottawa transformer station the second 110,000-volt circuit, which is a direct line from the Gatineau Power Company's transformer station at Valtetreau, was placed in service on November 23, 1930. This circuit, together with the tap from the Valtetreau-Smiths Falls 110,000-volt line, assures a reliable supply of Gatineau power for the Ottawa district.

At Trenton a new 750-kv-a. outdoor transformer station was placed in service on November 2, 1930.

At Napanee a new 300-kv-a. transformer station was built for the purpose of supplying power into the rural power district. This station was placed in service on December 10, 1930.

At Forfar distributing station the 100-kv-a. single-phase transformer was replaced by two 500-kv-a. single-phase transformers. This station was originally supplied at 44,000 volts, but was changed to 110,000 volts to conform with the change in the voltage on the line extending between Smiths Falls and Kingston from which this station is supplied.

### Generating Stations

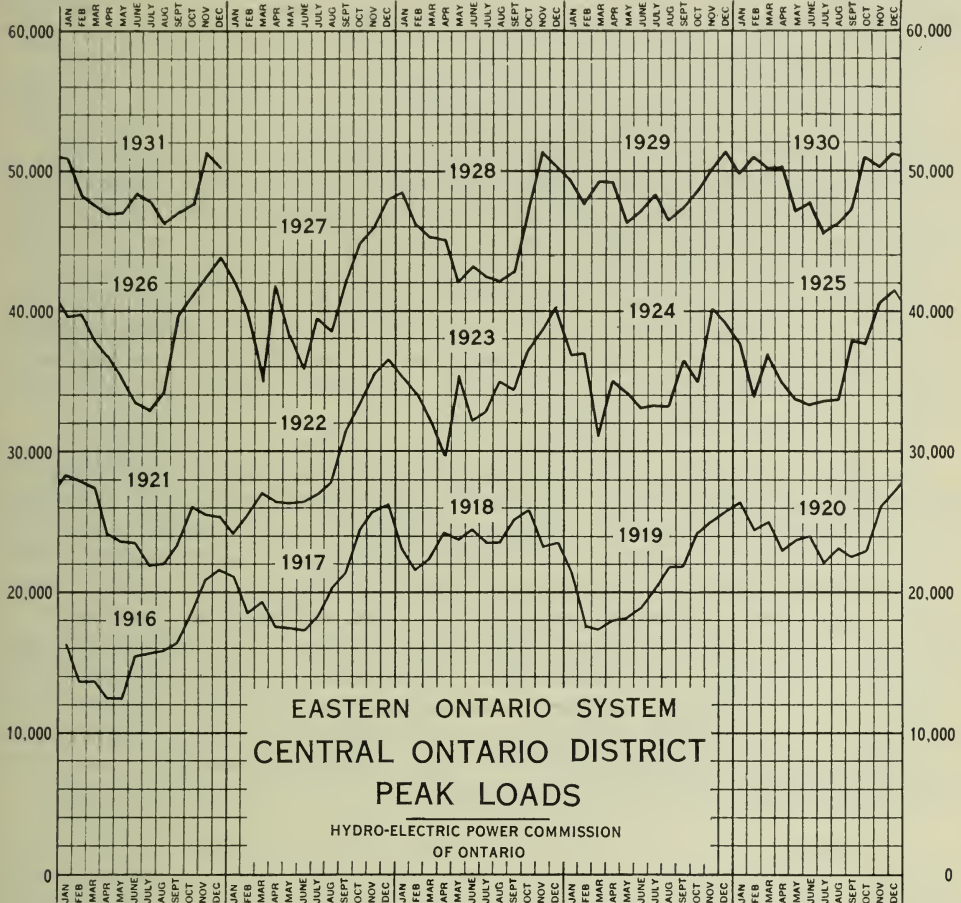
At Sidney, plant No. C2, no extensive maintenance work was necessary. The lower guide bearing of one turbine was rebabbitted. A considerable amount of grading was done around the station site, and approximately 80 acres of land adjoining the plant were reforested.

At Frankford, plant No. C5, the governors were all overhauled, the forebay was unwatered and the racks cleaned. The turbines were all inspected and defective gates were replaced. The station ground bus was extended out of the plant and connected to the rural feeder ground.

At Meyersburg, plant No. C8, an inspection was made of the turbines and hydraulic equipment, but no extensive maintenance work was found necessary. The upper guide bearings on two generators were replaced, and the defective bearings rebabbitted. Forty-one damaged wedges were replaced in the armature of the direct-connected exciter of one unit. All the high-tension oil-breakers were overhauled. Five defective insulators were replaced on the high-tension bus structure. The floor of the generator room and the bases of all the generators were painted.

HORSEPOWER

HORSEPOWER



At Hagues Reach, plant No. C9, the forebay was unwatered and the racks were cleaned, all turbines were inspected. A new speed ring was installed in one turbine. The runner of this turbine was eroded but satisfactory repairs were made by welding. The governors were all inspected. A new set of gears and drive chain were installed in one governor pump. As a safety measure a railing was installed on both sides of the walk on top of the wall between the forebay and the river. Five defective insulators were replaced on the high-tension bus structure. The collector rings of all units and the commutators of all exciters were ground. The thrust bearing of one generator which had been overheated was overhauled. A defective high-tension bushing was replaced on one of the oil-breakers. All high-tension oil-breakers were overhauled.

As mentioned in previous Annual Reports, the above two plants are of the automatic supervisory remote-controlled type, and it is of interest to note that they have operated very satisfactorily throughout the year. They have now been in service for more than six years.

At Ranney falls, plant No. C10, the forebay was unwatered and the racks cleaned. The turbines were inspected and adjustments were made to the



lignum vitae bearing. New copper ground plates were installed in the river bed and connected to the high-tension transformer neutral ground. All low-tension oil-breakers and one high-tension oil-breaker were overhauled.

At Seymour, plant No. C11, the forebay was unwatered and the racks were cleaned. The head-gate was wire brushed and painted. All five turbines were overhauled. Defective wedges in the crown gears were replaced. A defective bearing on the countershaft of one unit was rebabbitted. All governors were inspected and painted. One governor was completely overhauled. The governor of the turbine exciter was overhauled. Extensive painting was carried out at this plant, including generator-room floor, walls and ceiling and all steel work, basement floor, walls and ceiling and the walls and ceiling of two transformer pockets. All generators, exciters and two transformer casings were also painted. A new voltage-control rheostat was installed on the regulator. Thirty-four defective coils were replaced in one of the generators. The high-tension oil-breakers were overhauled.

At Heely Falls, plant No. C14, all turbines were unwatered and inspected and necessary repairs made to the glands and stuffing boxes. The screen on the Pelton wheel of one unit was cleaned. The rusted sections of two penstocks were wire brushed and painted. The relief valves of all units were overhauled. To facilitate the raising and lowering of the racks in front of the units, steel guides were bolted to the sides of the racks. The stairs, railings and floors of the high-tension and low-tension galleries were painted. The high-tension and low-tension oil-breakers were overhauled. New indicating meters were installed in the high-tension relay circuits. New voltmeter and synchronizing jacks were installed, and extensive changes made to the wiring of the benchboard. A fire-fighting pump was installed and a four-inch water connection was made between the pump house and power house.

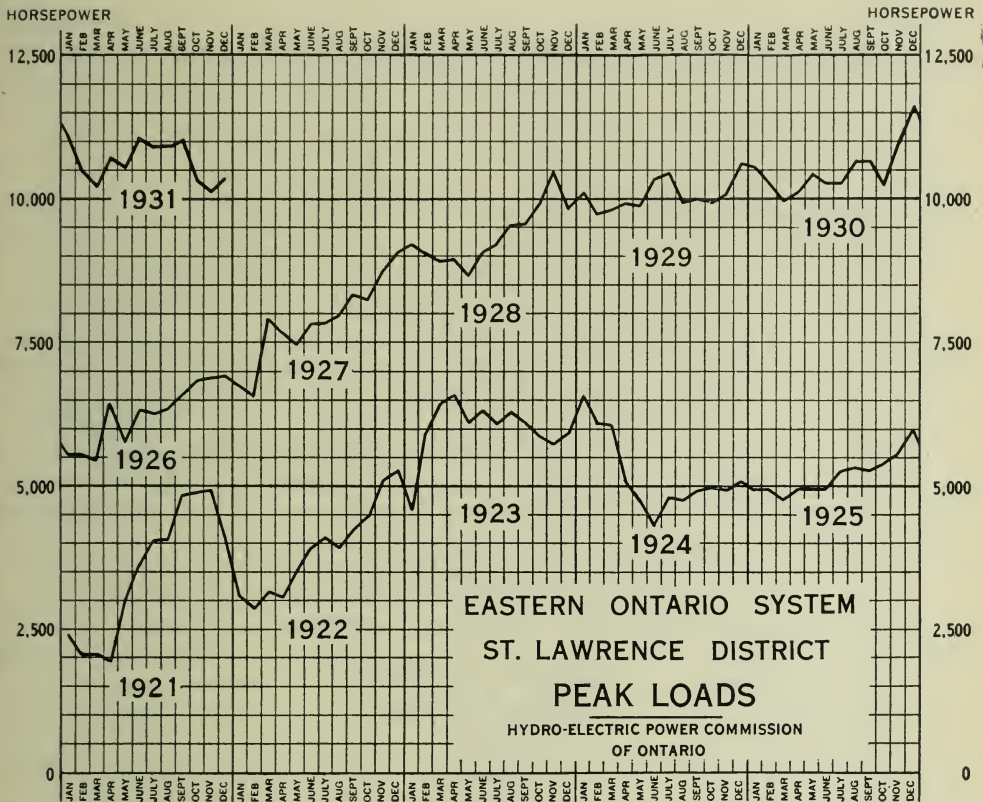
At Auburn, plant No. C18, the forebay was unwatered and the racks cleaned. Turbines were inspected and broken gates were replaced where necessary. New pressure tanks were installed on all governors. The governor pumps were all overhauled. The power house floors were painted.

At Fenelon Falls, plant No. C30, the turbines were all inspected but no extensive maintenance work was necessary. A new 11,000-volt oil-breaker, with relay equipment, was installed. The collector rings on the generators were replaced. A large number of defective bars were replaced in the armature of one of the generators which failed in service.

At Calabogie generating station on the Madawaska river, a voltage-adjusting rheostat was installed on the regulator. The control solenoids in the graphic wattmeter and voltmeter were changed, from direct current to 110-volt alternating current. Metering equipment was installed on the Calabogie-Barryvale low-tension feeder.

At Galetta generating station on the Mississippi river, the turbines were overhauled, and a number of defective gates were replaced. Metering equipment was installed on the Carp and Fitzroy Harbour low-tension feeders.

At High Falls generating station on the Mississippi river, no extensive maintenance work was necessary. The high-tension electrolytic lightning

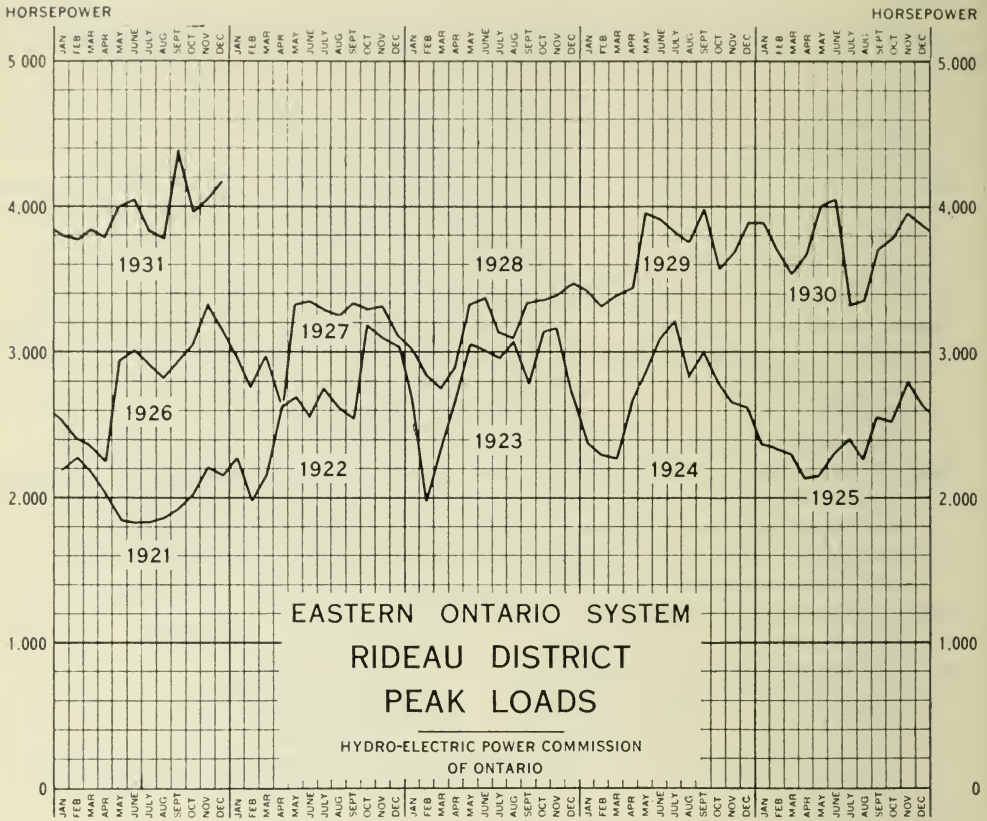


arresters and the high-tension and low-tension oil-breakers were overhauled. A large amount of weeds and trash had to be removed from the forebay and racks. Approximately four thousand seedling trees were planted on the Commission's property in this district.

#### Municipal, Distributing and Switching Stations

At Belleville No. 1 distributing station a number of improvements were made. All the obsolete low-tension equipment was replaced with iron-clad equipment together with meters and relays. A gravity balance-type graphic wattmeter and a r-kv-a. meter were installed. New indoor-type 44,000-volt lightning arresters were also installed. A defective bushing was replaced on the high-tension oil-breaker. An addition was built to the old sub-station. A sewer was installed from the station and from the operator's cottage to the main sewer. A new roof was built over the old section of the sub-station.

At Belleville switching station the remaining three obsolete rotor-type disconnecting switches were replaced by new double-break disconnecting switches. A new sixty-cell 120-volt storage battery was installed. The 44,000-volt current transformers on five of the high-tension lines were rebuilt. All the high-tension oil-breakers were overhauled.



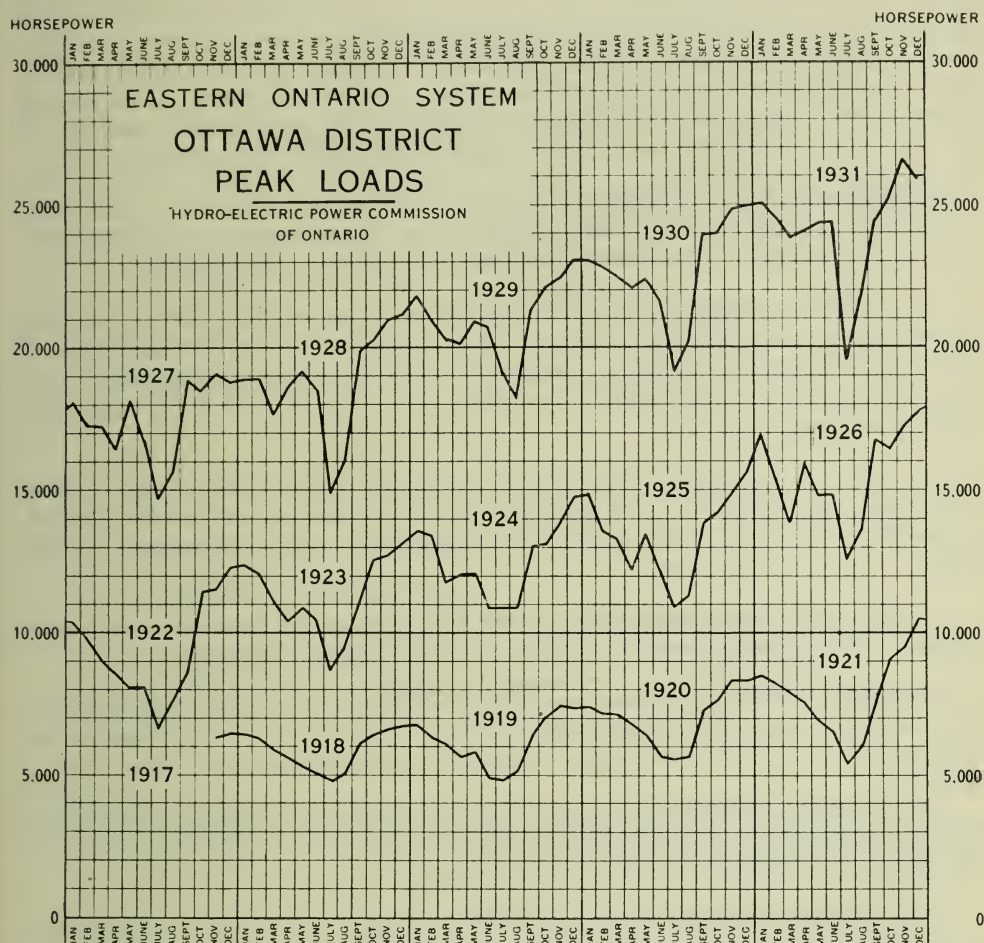
At Cobourg the 300 kv-a. transformer was replaced with a 750 kv-a. transformer. The 44,000-volt electrolytic lightning arresters were overhauled. The water-cooling tank was replaced on the transformer water-cooling tower. The station floor, doors, etc., were painted.

At Colborne a third 100 kv-a. transformer was installed and the station converted for 3-phase operation. The low-tension voltage was increased to 4,160 volts.

At Kingston distributing station the 44,000-volt electrolytic lightning arresters were overhauled. The oil was changed in two of the 750 kv-a. transformers.

At Lindsay distributing station one of the 750 kv-a. transformers failed in service. This transformer was repaired and a new water-cooling coil was installed. The high-tension and low-tension electrolytic lightning arresters were overhauled. The high-tension oil-breaker was also overhauled. The appearance of the station was improved by painting.





At Lehigh all the high-tension and low-tension equipment was thoroughly cleaned. The oil-breakers were all overhauled.

At Millbrook distributing station an improved type of metering equipment was installed. Repairs were made to the large doors, and the station appearance was improved by painting.

At Napanee distributing station the station site was considerably improved by grading. A new septic tank was installed and the old well was thoroughly cleaned out.

At Norwood distributing station the oil was changed in the 300 kv-a. transformer. The 44,000-volt air-break switch was overhauled. A new feeder panel, complete with oil circuit-breaker, was installed in connection with the power supply to Hastings. A 24-volt storage battery was also installed.

At Oshawa No. 1 transformer station one of the 3,000 kv-a. transformers failed in service, was returned to the manufacturer for repairs, and reinstalled on its return. The high-tension and low-tension oil-breakers and the high-tension lightning arresters were all overhauled. Three defective 2-kw. station service transformers were replaced by three 5-kw. transformers. The station property was improved by grading and seeding. A considerable amount of painting was also carried out at this station both indoor and outdoor.

At Oshawa No. 2 transformer station a new switching platform was built in order to facilitate work when operating the high-tension transformer disconnecting switches. The 44,000-volt lightning arresters were painted.

At Oshawa condenser station the collector rings of the 5,000 kv-a. condenser were ground on two occasions. The armature of the starting motor of the 1,000 kv-a. condenser was completely rewound. The condenser-bus synchronizing potential transformers were relocated. The station floor, doors and window sash were painted.

At Port Hope distributing station a graphic r-kv-a. meter and testing equipment were installed. A 1,000-ohm resistance was installed on the graphic wattmeter contacts in order to help in eliminating radio interference in this district.

At Port Hope switching station the high-tension oil-breakers were overhauled. Ground relays were installed on the 44,000-volt oil-breakers.

At Picton distributing station a defective 300 kv-a. transformer was repaired. Two defective potential transformers and one defective current transformer were replaced. A defective graphic wattmeter was repaired and reinstalled.

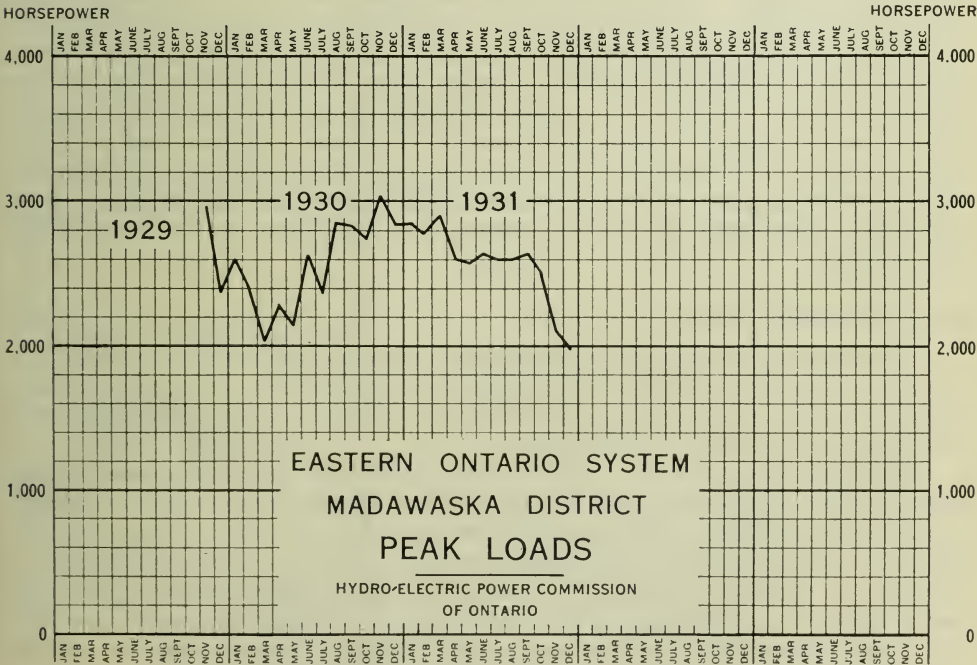
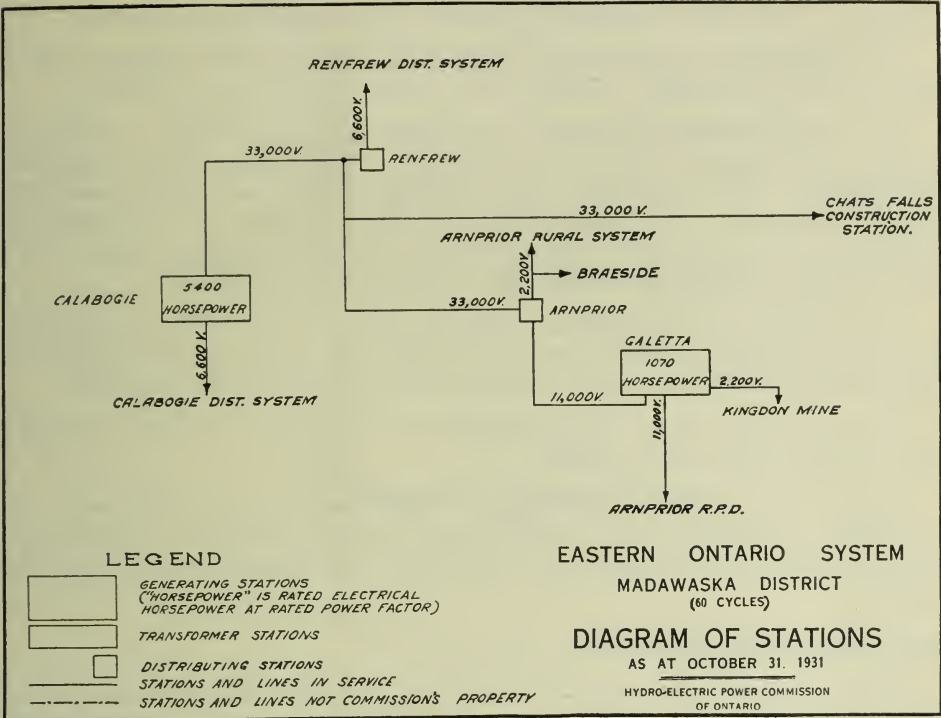
At Sulphide distributing station the low-tension oil-breakers were overhauled. A defective 44,000-volt choke-coil insulator was replaced. The oil was changed in the three 100 kv-a. transformers.

At Stirling municipal station extensive changes were made to the low-tension equipment. The rural feeder was connected to the low-tension bus through an oil-breaker. Metering and testing equipment was installed and the instrument transformers were rearranged.

At Sidney terminal station all the high-tension and low-tension oil-breakers and the high-tension lightning arresters were overhauled. The potential supply to the meters and relays was rearranged.

At Warkworth distributing station the 50 kv-a. transformer failed in service and was replaced by a 100 kv-a. transformer. Two defective insulators were replaced on the high-tension structure.

At Alexandria the 300 kv-a. transformer failed in service and was returned to the manufacturer where it was completely rebuilt. This transformer was replaced by a 300 kv-a. transformer which had been held in reserve at Smiths Falls. Several minor improvements were carried out at this station. The transformer platform was completely rebuilt. A new ground conductor was installed. New and additional cross-arms were erected to support the high-tension leads. The station floor, windows, sash, etc., were painted.





At Apple Hill the high-tension switch structures were straightened up and re-guyed. The 44,000-volt air-break switch was completely reinsulated.

At Chesterville the low-tension lightning arresters were replaced with an improved type of arrester. Repairs were made to the station property.

At Cornwall the high-tension oil-breakers were overhauled. A defective 110,000-volt entrance bushing was replaced. New synchronizing equipment was installed. The transformer water-cooling system and pumps were thoroughly overhauled. The station site was further improved by grading and seeding and by painting the operators' cottages and boundary fences. As a safety measure, additional fire-fighting equipment was installed.

At the Howard Smith Paper Company's transformer station a permanent bus tie was installed between the old and the new low-tension bus structures. Minor repairs were made to the roof and to the outside station structure.

At the Lower Lakes Terminal Elevator, located near Prescott, a 44,000-volt air-break switch was installed.

At Lyn two 100 kv-a. transformers failed in service during the year. The first failure was replaced by a transformer in reserve elsewhere on the system, and the second by the transformer which had first burned out and had been repaired.

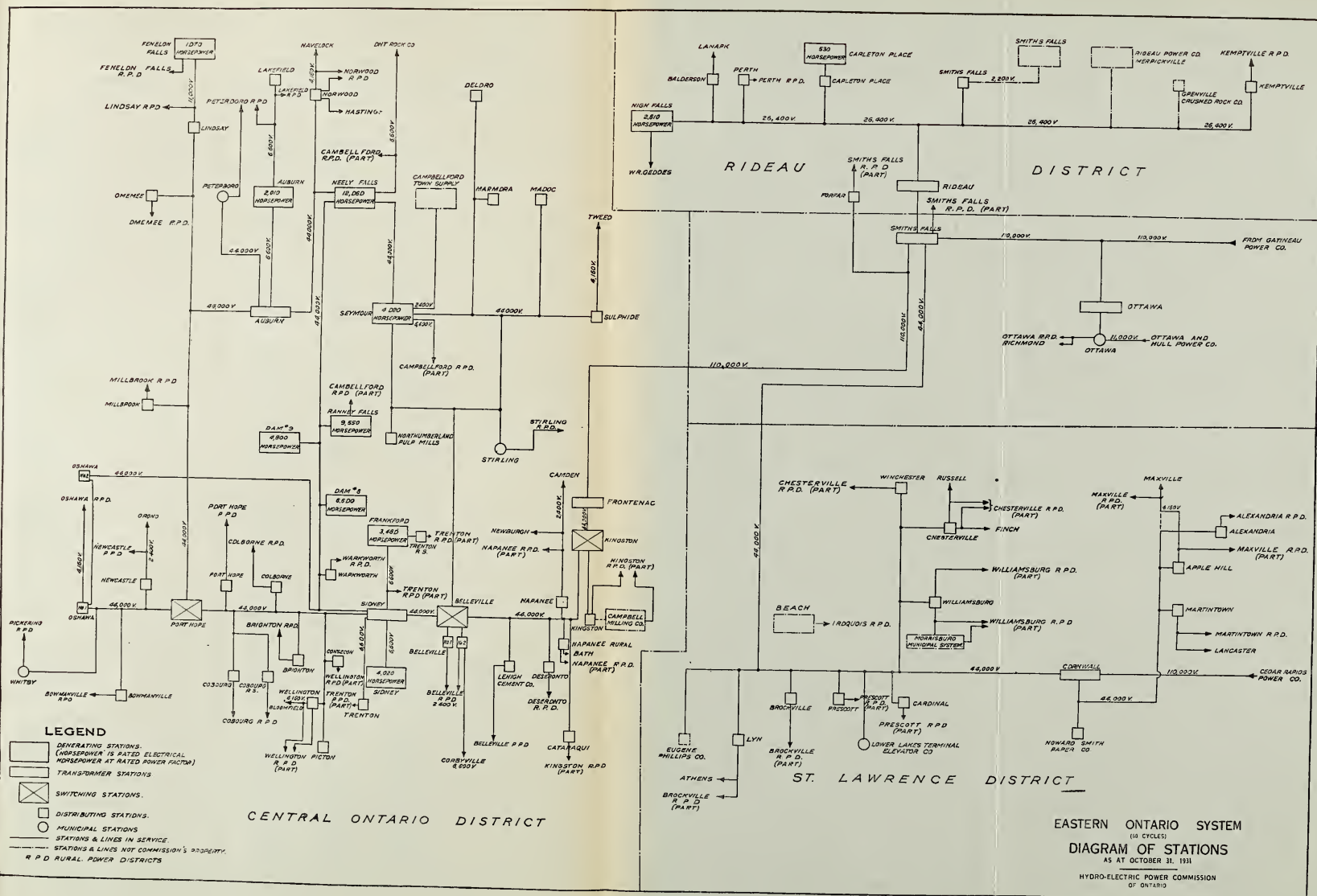
#### **High-voltage Transmission Lines**

Work in connection with the inspection and maintenance of high-voltage transmission lines was actively carried out during the year. Approximately 9,000 poles were inspected, of which 800 were found defective at the ground line and were stubbed. Over 20,000 suspension-type insulator units were tested and it was found that only 390 had to be replaced. Approximately 41,000 pin-type insulators were inspected, and 1,600 were found defective and were replaced. A considerable number of poles were straightened in the various high-tension line sections. An active program of tree trimming was carried out by the Commission's Forestry Branch in the Central Ontario and St. Lawrence districts. Two sets of 44,000-volt disconnecting switches were installed for sectionalizing purposes at the junction of the line to the Kingston elevators. Extensions were made to the low-tension lines in several of the rural power districts.

#### **Repair Shops and Testing**

The Belleville machine and meter repair shop has continued the usual programme of testing and repairing the various types of meters. A certain amount of work was also carried out in connection with repairs and replacement parts for hydraulic and electrical apparatus.

The meter department, which is responsible for the maintenance of all metering and relay equipment on this system, carried out a series of special ground resistance tests at a number of stations with a view to improving the high-tension neutral and high-tension arrester grounds. This department is available on request to any of the municipalities wishing electrical measurements made or technical problems investigated. During the past year the meter engineers of this section have carried out a number of tests for various municipalities and private companies connected to this system.







## EASTERN ONTARIO SYSTEM—LOADS OF MUNICIPALITIES—1929-1930-1931

Municipality	Peak load in horsepower			Change in load 1930-1931	
	Oct. 1929	Oct. 1930	Oct. 1931	Decrease	Increase
Alexandria.....	214.7	260.9	184.5	76.4	.....
Apple Hill.....	28.0	27.5	28.0	.....	0.5
Athens.....	70.7	87.9	74.2	13.7	.....
Belleville.....	3,551.5	3,539.7	3,687.5	.....	147.8
Bloomfield.....	101.2	121.0	87.8	33.2	.....
Bowmanville.....	1,724.4	1,766.4	1,551.4	215.0	.....
Brighton.....	265.4	274.2	284.8	.....	10.6
Brockville.....	1,954.5	2,220.2	2,271.2	.....	51.0
Cardinal.....	.....	112.6	131.3	.....	18.7
Carleton Place.....	879.9	843.1	848.5	.....	5.4
Chesterville.....	167.5	198.4	197.7	0.7	.....
Cobourg.....	1,361.7	1,383.0	1,468.6	.....	85.6
Colborne.....	168.9	190.6	182.3	8.3	.....
Deseronto.....	152.8	181.3	146.8	34.5	.....
Finch.....	38.1	50.0	38.9	11.1	.....
Havelock.....	220.9	228.5	227.9	0.6	.....
Kemptville.....	217.7	241.3	241.9	.....	0.6
Kingston.....	4,221.8	4,451.8	4,580.0	.....	128.2
Lakefield.....	192.3	225.6	227.7	.....	2.1
Lanark.....	56.0	61.6	61.8	.....	0.2
Lancaster.....	44.9	67.4	62.9	4.5	.....
Lindsay.....	1,522.7	1,662.3	1,718.9	.....	56.6
Madoc.....	142.6	168.9	165.7	3.2	.....
Marmora.....	86.6	87.6	89.2	.....	1.6
Martintown.....	25.2	27.5	26.1	1.4	.....
Maxville.....	52.2	58.0	72.6	.....	14.6
Millbrook.....	68.6	85.6	68.9	16.7	.....
Napanee.....	957.5	1,009.8	1,015.2	.....	5.4
Newburgh.....	236.0	45.5	41.0	4.5	.....
Newcastle.....	72.9	82.0	82.5	.....	0.5
Norwood.....	142.5	168.7	135.3	33.4	.....
Omeme.....	72.9	74.4	76.6	.....	2.2
Orono.....	165.7	60.9	58.5	2.4	.....
Oshawa.....	8,880.7	8,706.4	7,369.9	1,336.5	.....
Ottawa.....	22,079.0	24,047.4	25,445.0	.....	1,397.6
Perth.....	774.8	891.4	1,069.1	.....	177.7
Peterborough.....	6,271.0	6,400.2	6,158.4	241.8	.....
Picton.....	892.7	804.3	887.4	.....	83.1
Port Hope.....	1,207.7	1,331.6	1,108.0	223.6	.....
Prescott.....	682.7	882.5	815.5	67.0	.....
Richmond.....	38.3	49.0	39.4	9.6	.....
Russell.....	50.2	72.4	57.9	14.5	.....
Smiths Falls.....	1,410.2	1,615.3	1,597.9	17.4	.....
Stirling.....	282.8	252.5	265.1	.....	12.6
Trenton.....	2,610.6	2,731.6	2,874.1	.....	142.5
Tweed.....	214.5	197.0	189.9	7.1	.....
Warkworth.....	57.6	69.9	75.8	.....	5.9
Wellington.....	144.0	201.0	205.9	.....	4.9
Whitby.....	958.5	1,020.1	1,028.5	.....	8.4
Williamsburg.....	35.3	37.3	69.7	.....	32.4
Winchester.....	198.4	212.3	216.4	.....	4.1

Note:—Nepean rural power district and Richmond included in Ottawa load.

## EASTERN ONTARIO SYSTEM—NEW MUNICIPALITIES

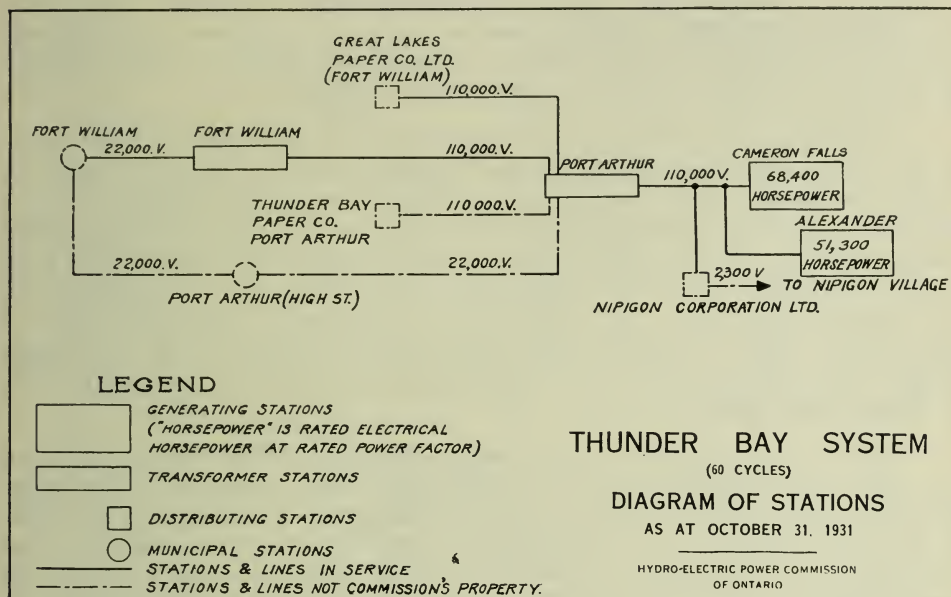
Municipality	Date connected	Initial	Oct. 1930	Change in load	
				Decrease	Increase
Hastings.....	May 27, 1931	91.7	73.7	18.0	.....

## EASTERN ONTARIO SYSTEM—RURAL POWER DISTRICT LOADS—1929-1930-1931

Rural power district	Peak load in horsepower			Change in load 1930-1931	
	Oct. 1929	Oct. 1930	Oct. 1931	Decrease	Increase
Alexandria.....	.....	15.2	25.0	.....	9.8
Belleville.....	170.4	240.4	281.6	.....	41.2
Bowmanville.....	4.9	56.7	160.4	.....	103.7
Brighton.....	.....	14.0	16.8	.....	2.8
Brockville.....	59.2	406.3	269.0	137.3	.....
Campbellford.....	54.7	54.7	58.9	.....	4.2
Chesterville.....	82.2	104.4	184.5	.....	80.1
Cobourg.....	110.1	122.3	220.3	.....	98.0
Colborne.....	44.2	67.0	77.0	.....	10.0
Iroquois.....	.....	375.0	415.5	.....	40.5
Kingston.....	51.6	151.3	265.7	.....	114.4
Lakefield.....	1.0	1.0	10.0	.....	9.0
Lindsay.....	.....	0.0	4.0	.....	4.0
Martintown.....	42.2	46.5	62.5	.....	16.0
Maxville.....	0.7	91.1	118.4	.....	27.3
Millbrook.....	.....	27.0	31.9	.....	4.9
Napanee.....	5.0	103.4	145.8	.....	42.4
Nepean.....	355.8	450.3	563.8	.....	113.5
Newcastle.....	14.5	47.1	61.7	.....	14.6
Norwood.....	5.3	9.7	21.0	.....	11.3
Oshawa.....	397.4	372.6	667.1	.....	294.5
Peterborough.....	424.7	434.3	476.4	.....	42.0
Prescott.....	69.0	85.3	92.0	.....	6.7
Smiths Falls.....	76.0	137.3	211.0	.....	73.7
Stirling.....	.....	26.3	46.2	.....	19.9
Trenton.....	10.0	12.4	139.0	.....	126.6
Warkworth.....	1.0	2.5	3.0	.....	0.5
Wellington.....	16.0	108.8	169.7	.....	60.9
Williamsburg.....	8.4	20.6	32.8	.....	12.2

## EASTERN ONTARIO SYSTEM—NEW RURAL POWER DISTRICT LOADS, 1931

Rural power district	Date connected	Load in horsepower		Change in load	
		Initial	Oct. 1931	Decrease	Increase
Fenelon Falls.....	July 1, 1931	25.5	20	5.5	.....
Kemptville.....	Nov. 29, 1930	3.6	13.4	.....	9.8
Omemece.....	Dec. 29, 1930	3.0	3.0	.....	.....
Perth.....	Aug. 17, 1931	10.0	3.0	7.0	.....



## THUNDER BAY SYSTEM

The load on the Thunder Bay system during the past fiscal year showed a decrease from that existing during the previous year, the peak load for the year showing a decrease of 5,386 h.p., or seven per cent, and the total energy decreasing sixteen per cent. These figures refer to the actual power supplied on the system, not to the revenue load. At the end of the fiscal year the revenue load, that is, the power sold and paid for according to contract, exceeded the power actually supplied by over 8,000 h.p.

The pulp mill at Nipigon has not been operating during the year, but the transformer station has been maintained in service in order to supply power to Nipigon village and township.

Two additional generator units have been placed in operating service at Alexander generating station during the year, No. 2 unit on December 17, 1930, and No. 1 unit on February 27, 1931. No. 3 generator unit, which was temporarily connected for service in the latter part of last year, was changed over to permanent connections on March 9, 1931.

A small amount of new relay equipment was placed in operating service, both at Cameron Falls generating station and at Port Arthur transformer station, during the year. No new equipment has been installed at Fort William transformer station.



A large amount of hydraulic maintenance work has been carried on at Cameron Falls generating station during the year, the major item being the repairing of the eroded areas of No. 5 turbine by welding the runner in place. While No. 1 generator was dismantled for cleaning, the turbine runner was removed and repainted. Special attention was paid to the testing and adjustment of the governors. The auxiliary hydraulic equipment has been carefully gone over and placed in first-class operating condition.

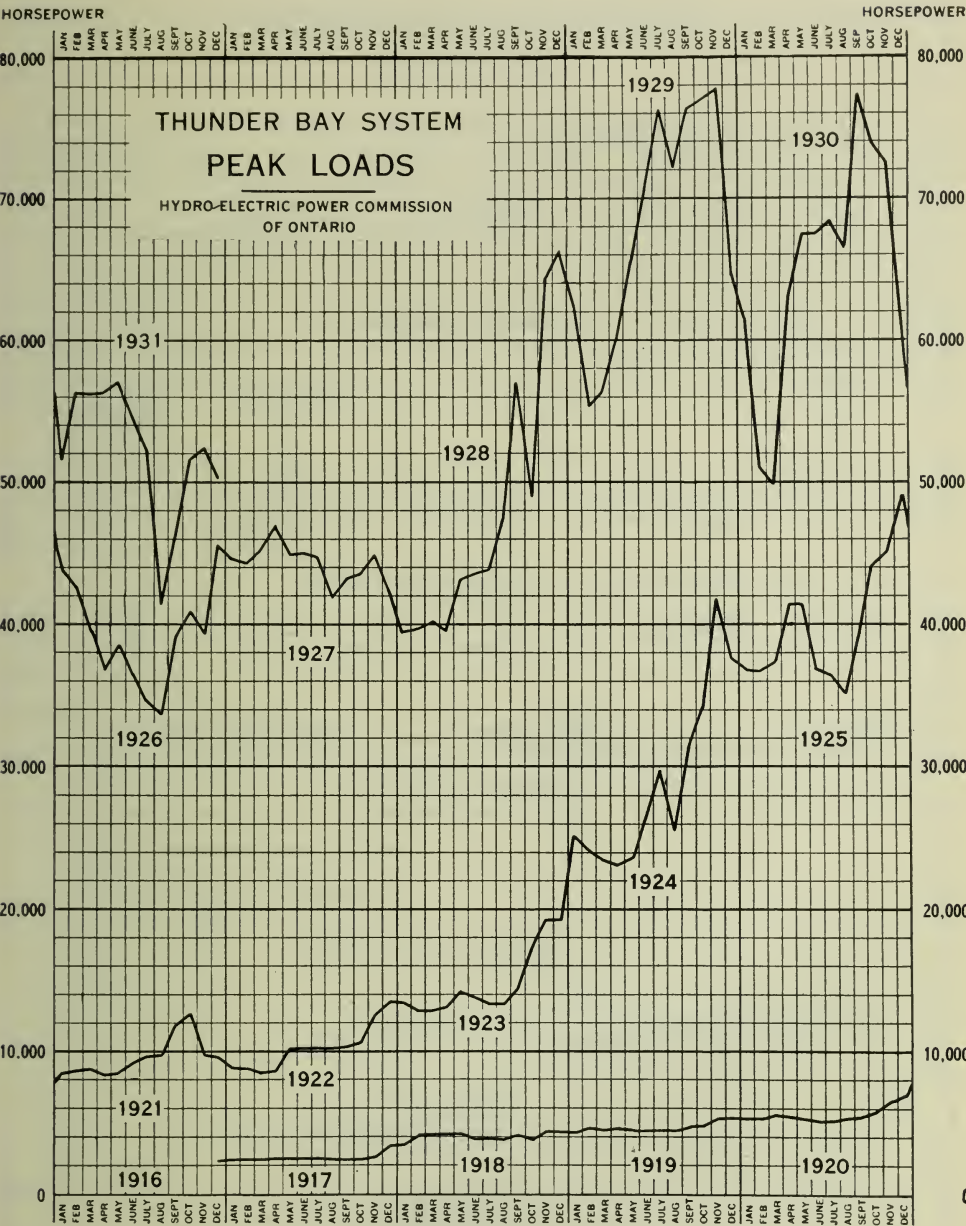
During the first part of the year No. 6 generator at Cameron Falls generating station was dismantled, by the Canadian General Electric Company, in order to install larger field poles and larger fans on this machine. No. 1 generator was dismantled during the latter part of the year for cleaning and repairs. This work was only partially complete at the year end. The main power transformer, which was dismantled the previous year, was reassembled and returned to service. On January 16, the blue-phase transformer of No. 2 bank failed. This was rebuilt and is now in good condition. All of the main power transformers on the system have now been overhauled, and are in first-class operating condition.

The service obtained from the transmission lines during the year has been very good. A tree falling into the transmission line accounted for the major outage to Nipigon Corporation station, a flashover while testing a disconnecting switch at Dorion was responsible for another interruption, while a third interruption was caused by the removal of a line from service with this station being supplied from it. Fort William transformer station had one interruption during the year, due to a flashover on the 110,000-volt transmission line from Port Arthur transformer station. In co-operation with the Department of Highways about twenty-five hundred feet of 110,000-volt wood-pole line was moved to one side in order to clear the right-of-way for the new bridge and highway at McKenzie river. Alterations were also made to the section of line between Port Arthur transformer station and the Great Lakes Paper Company in co-operation with the Canadian National Railway. Some other maintenance work, tightening guys, etc., has also been done on the wood-pole lines. Brush was cut along certain sections of the right-of-way.

The Port Arthur transformer station has had no curtailment of service to any customer due to failures of equipment. The relay and breaker equipment have all operated satisfactorily during the year. Ground selector equipment was placed in service in this station on October 11, 1931, to augment the protective features of the 22,000-volt feeder equipment.

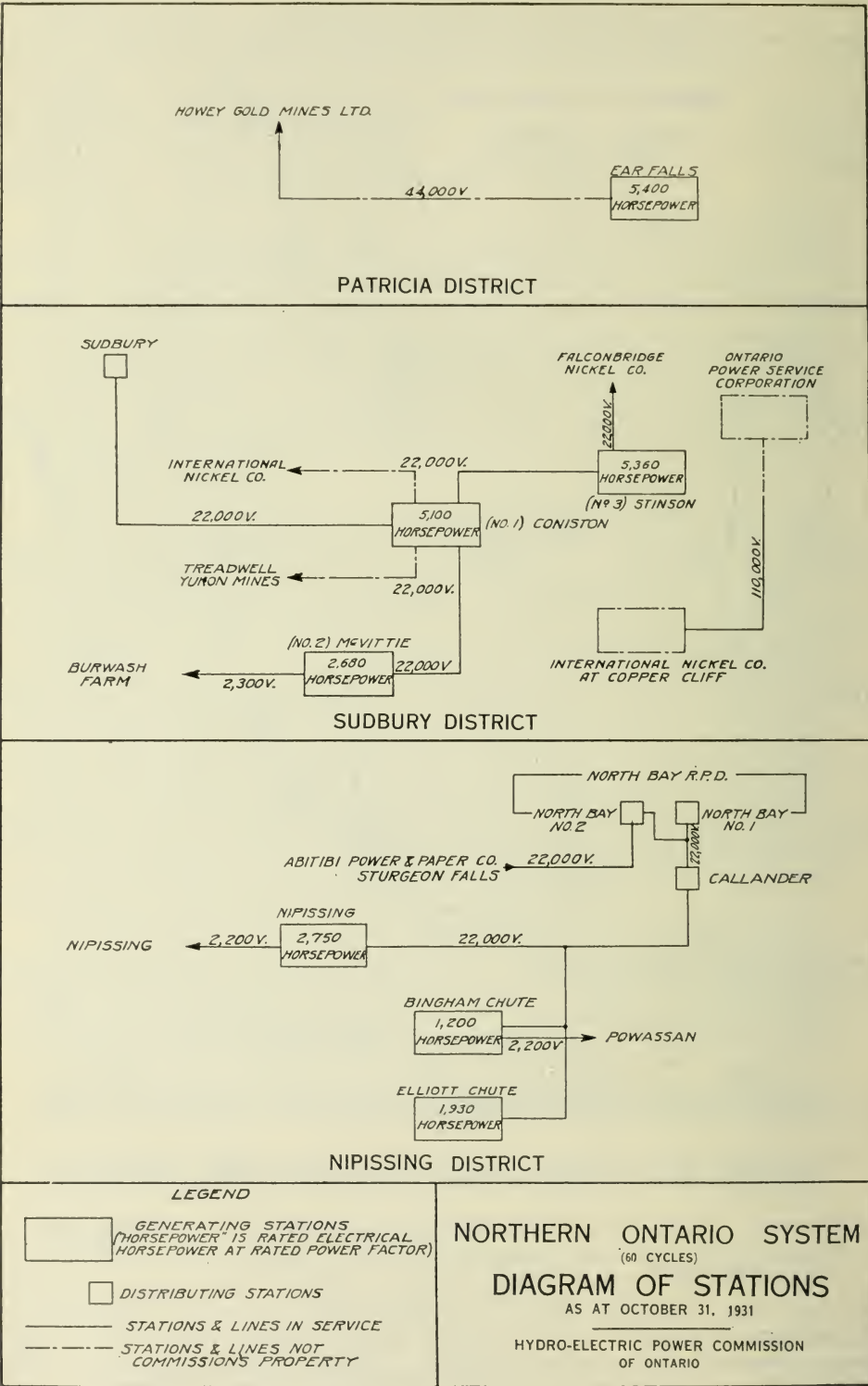
The Fort William transformer station has also had no failure of equipment or incorrect functioning of relays or breakers. The high-tension connections to the transformers at this station have been improved by replacing the spring clamps with a screw type, thus giving a more positive connection.

The precipitation in the watershed supplying this system\* has been relatively heavy during the year. The two generating stations have been operated in such a way as to conserve the largest amount of water. With the light load on the system, the heavy precipitation, and the two stations in operation, the level of Lake Nipigon has been raised about two feet. The logs in the dam at Virgin falls have been jacked down very much tighter in order to cut down the river flow, and the auxiliary dams around Lake Jessie have been repaired.



THUNDER BAY SYSTEM—LOADS OF MUNICIPALITIES, 1929-1930-1931

Municipality	Peak load in horsepower			Change in load 1930-1931	
	Oct. 1929	Oct. 1930	Oct. 1931	Decrease	Increase
Fort William.....	9,966.5	10,596.5	11,451.7	.....	855.2
Nipigon Township.....	57.6	65.7	70.3	.....	4.6
Port Arthur.....	41,863.2	38,619.4	27,024.4	11,595.0	.....





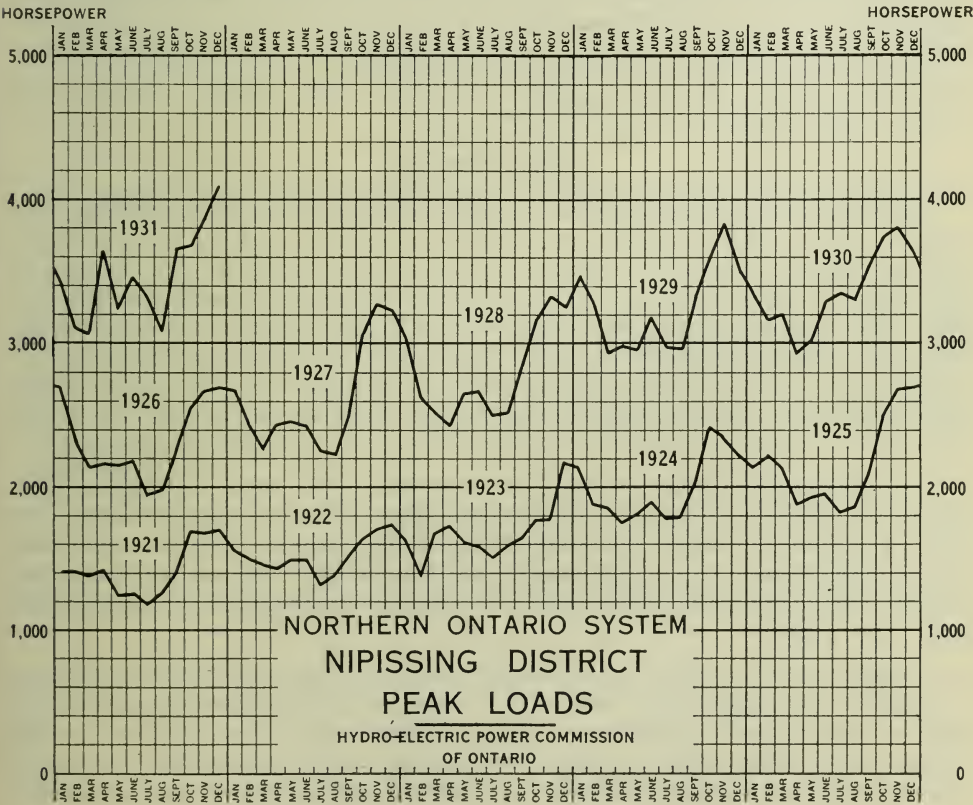
NORTHERN ONTARIO SYSTEM

Nipissing District

Owing to the amount of water available in storage on this district being greatly reduced as a result of three consecutive dry years, a serious power shortage was foreseen, and in order to prevent drastic load reductions, arrangements were made for a supplementary supply of power from the Abitibi Power & Paper Company's plant at Crystal Falls on the Sturgeon river, (formerly known as Smoky Falls). Twenty-four miles of 22,000-volt line were constructed to transmit this power from the Abitibi Power & Paper Company's line near Sturgeon Falls to the Commission's sub-station at North Bay. A slight reduction in load was required prior to the completion of the line, but the existence of this line now protects the Nipissing system against any shortage in the supply of power for several years to come.

The usual programme of progressive maintenance and improvement of storage dams on the system was adhered to, and studies were made of several possibilities for further storage. Stream-flow gauging facilities were improved and increased.

Approximately one mile of single-circuit 22,000-volt line between Nipissing power house and Bingham Chute junction, which required rebuilding, was relocated in an improved position. Alterations to the main double-circuit 22,000-volt lines were required at Callendar to accommodate highway improve-



ment. Some adjustment was required on the new tie line between Sturgeon Falls and North Bay. Insulator testing was carried out with a view to inaugurating a progressive system of faulty-insulator replacement.

Inspection of turbines at all three power houses was carried out and all units were found in good condition, a few minor adjustments being all the maintenance work required. All wood-stave pipe lines were inspected and found to be in good condition requiring only the painting of all hardware with a preservative.

At Elliott Chute generating station, which is remotely controlled, special automatic heating equipment has been designed to keep warm the oil in the generator bearing and governor pilot valve during periods of shut down in cold weather, and thus prevent sluggish operation at times of starting. Road diversions, necessitated by the building of this plant, have been maintained in accordance with agreements.

At Bingham Chute generating station a new five-roomed frame construction cottage was erected, which relieved to a large extent the inadequacy of living quarters for the employees of the Commission.

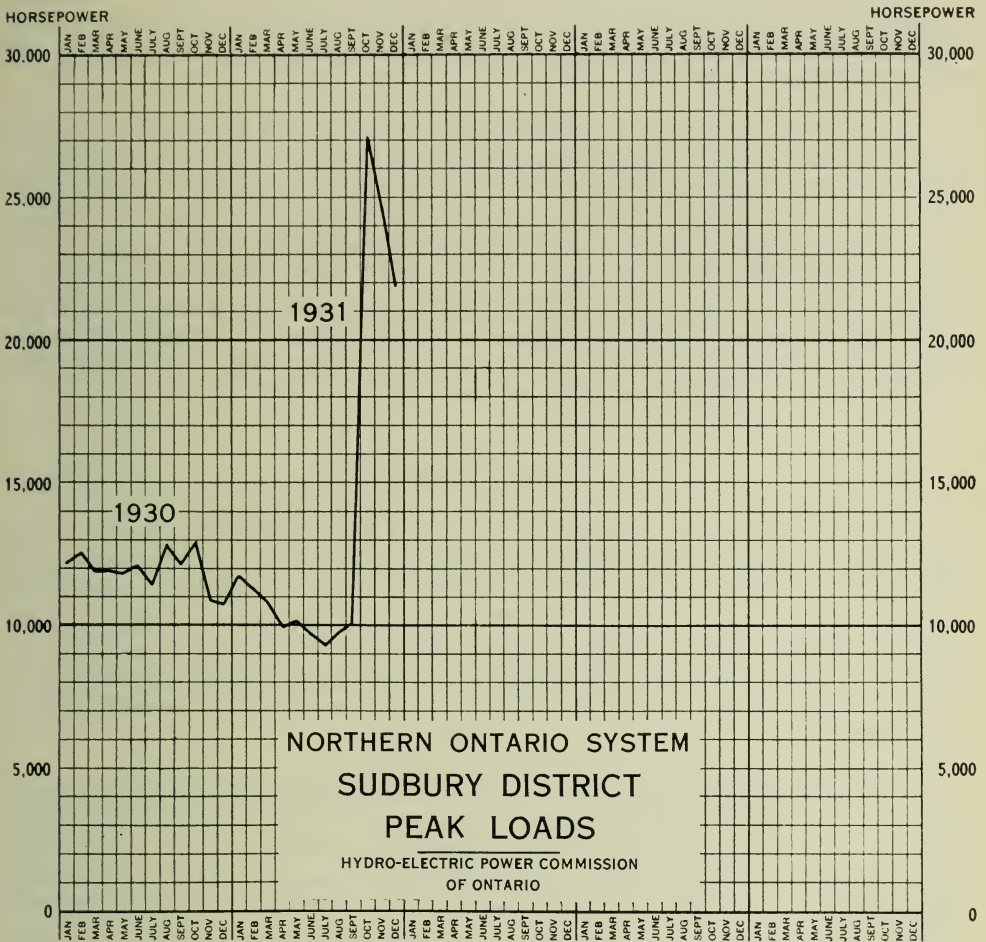
At Nipissing generating station the west wall, which was of temporary frame construction, was replaced by a permanent brick wall. Water-tight manholes were placed in the floor and stop log gains were erected at entrances to the station as protection in case of flood. Considerable building improvements incidental to this work were carried out. The obsolete electrolytic lightning arrester on the high-tension feeder was replaced with a new and modern arrester. The obsolete telephone exchange equipment was removed and an up-to-date ten-line exchange, properly protected, was installed, bringing the system telephone equipment up to standard.

#### **Sudbury District**

Although the municipal load on this district has increased slightly, this increase was, until the addition of the new sub-station and load of the International Nickel Company at Copper Cliff, more than offset by the decrease in load taken under contract by customers in the mining and smelting industries. While this new sub-station went into service September 30, and tests on the lines and equipment greatly increased the peak load for the district, as shown on graph given in this Report, delays in the completion of the customer's equipment prevented continuous power being taken, and the figures for the year's load of the district expressed in kilowatt-hours, were not greatly affected.

A considerable amount of work in connection with water storage has been carried out in this district during the past year. The rock-filled timber-crib dam on Scotia lake which was washed out during the flood of June, 1930, was rebuilt, the timber dam on Burwash lake was rebuilt, and rights have been obtained to permit raising the level of Wanapitei lake two feet above the previous high-water mark.

Approximately one-half of the 22,000-volt line from Coniston power house to Sudbury was completely rebuilt in a new and more accessible route. On the remaining portion, the No. 4 copper, which was inadequate to carry the existing load, was replaced with 4/0 aluminum conductor. This resulted in greatly improved voltage conditions at Sudbury and decreased the probability



of interruptions due to line troubles. As a further assurance of continuous service, construction of a second circuit to Sudbury is under investigation. The telephone line between Sudbury and Wanapitei Lake dam was completely restrung, the iron conductor being replaced with No. 10 copper, and portions of the line which were difficult of access were relocated close to the highway. These changes reduced transmission losses and effected a saving in the cost of maintaining lines.

At Coniston generating station, a large amount of defective timber in the dam was renewed. New metering current transformers of higher capacity were installed on the Sudbury feeder to take care of the increased load. All machines were completely overhauled, a new upstream runner being required on No. 3 turbine and a new commutator on the 100-kw. exciter.

At McVittie generating station, complete overhauling of all machines and power transformers was carried out. The electrolytic lightning arrester on the high-tension feeder out of this station was overhauled following a breakdown of two sections. A large amount of filling was required at the back of the wing dam at this station to stop leaks which developed under the dam.



At Stinson generating station, all machines were inspected and very little maintenance work was necessary. A new thrust-bearing was installed on the exciter turbine.

The new 110,000-volt transmission line to Copper Cliff was ready for service on September 30, 1931, and tests were made on the line and on the customer's receiving station during October. Due to delays in the completion of the customer's equipment, they were not ready for continuous commercial delivery up to the end of the fiscal year covered by this Report. This new double-circuit transmission line is built on steel towers and extends from Hunta to Copper Cliff, a distance of 189 miles. At Hunta the line connects with the transmission line of the Ontario Power Service Corporation, from which power is purchased and delivered over the new line, at 110,000 volts, 25 cycles, to the International Nickel Company sub-station at Copper Cliff.

#### Patricia District

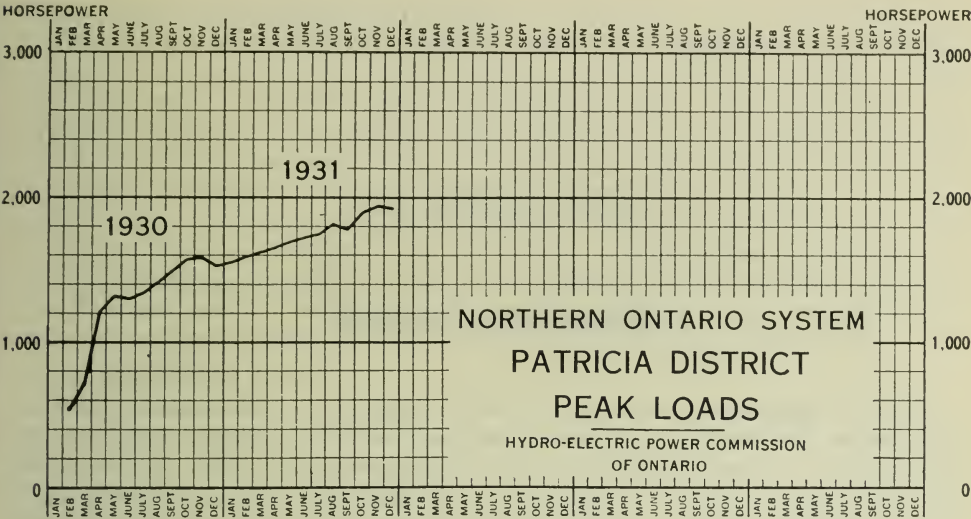
The generating and transformer station at Ear Falls on the English river has been in satisfactory operation throughout the year. All equipment has functioned as required, there being no failure of major importance. The load on the system was fairly steady for the most part with an increasing twenty-minute peak for the last three months. The peak for October amounted to 1,440 kilowatts, or 25 per cent. higher than the peak for the previous year. The average daily kilowatt-hour production also has increased steadily month by month.

Several interruptions to service took place during the lightning season, and there were three interruptions of rather long duration. On May 20, during a heavy snowstorm, oil-breaker 1B1T opened automatically, due to trouble at the receiving end, and owing to communication being cut off from the Howey mines during the severe storm, service was not resumed until some five and one-half hours later. On June 27, during an electrical storm, a current transformer caught fire and was removed from service. A replacement transformer was obtained and installed on July 5, during a prearranged interruption. On July 28 several hours interruption was occasioned by a short circuit on a temporary 2,200-volt lead at the Howey plant.

The 44,000-volt transmission line between the generating station and the Howey plant, which is owned by the Howey Mines, Limited, has been operated and maintained for this Company throughout the year under the same arrangement for costs as previously. This transmission circuit has functioned perfectly during the year and was not responsible for a single outage. Patrol and other work has been carried on throughout the year.

As required by the Lake-of-the-Woods Control Board the flow in the English river has been adjusted from time to time by means of the regulating dam at Ear Falls.

The precipitation in the vicinity of Ear Falls has been quite high, approximating twenty-eight inches during the year, with July recording the greatest amount, four and one-half inches. With this high precipitation, as well as conservation of water when not required, the level of Lac Seul has been again



raised, the level on October 31, 1931, being 1,161.0 feet, as against 1,159.4 feet on the corresponding day last year.

NIPISSING DISTRICT—LOADS OF MUNICIPALITIES—1929-1930-1931

Municipality	Peak load in horsepower			Change in load 1930-1931	
	Oct. 1929	Oct. 1930	Oct. 1931	Decrease	Increase
Callandar.....	107.2	110.7	112.8	.....	2.1
Nipissing.....	3.0	3.0	3.0	.....	.....
North Bay.....	2,992.6	3,111.2	2,921.8	189.4	.....
Powassan.....	96.6	95.1	117.7	.....	22.6

NIPISSING DISTRICT—RURAL POWER DISTRICT LOADS—1929-1930-1931

Rural power district	Peak load in horsepower			Change in load 1930-1931	
	Oct. 1929	Oct. 1930	Oct. 1931	Decrease	Increase
North Bay.....	42.2	69.7	68.3	1.4	.....

NORTHERN ONTARIO SYSTEM—NEW MUNICIPALITIES

Municipality	Date connected	Load in horsepower		Change in load	
		Oct. 1930	Oct. 1931	Decrease	Increase
Sudbury.....	Acquired May 1, 1930	3,799.0	3,967.8	.....	168.8

## SECTION III

### MUNICIPAL WORK

The Commission acts in an advisory capacity in connection with the operation of the "Hydro" utilities of the various municipalities with which it has contracts. In this connection the Commission arranges for the purchase, construction or extension of distribution systems and assists the municipal officials in making their financial arrangements to pay for the cost of these systems. All rate adjustments, as provided under The Power Commission Act, are recommended by the Commission, and a study of the operating conditions of all utilities is made annually and adjustments recommended accordingly. The Commission exercises a general supervision over the management and operation of all systems more especially in the smaller municipalities which, individually, are not of sufficient size to employ a manager with the technical knowledge necessary to administer properly all phases of the local system's operation.

In the case of the rural power districts, the Commission itself—on behalf of the corporations of the individual townships—operates the rural power systems, and distributes electrical energy to the customers of the respective corporations in any such rural power district.

### NIAGARA SYSTEM

A noteworthy event in connection with the Niagara system took place in 1931 when for the first time this system was supplied with power from a development on the main Ottawa river. This development is situated at Chats Falls, and was constructed jointly by the Commission and the Ottawa Valley Power Company. It was put into operation in the latter part of the year, two 23,500-kv-a. generating units being put into service. Two additional units which have been installed will be put into service in the early part of the coming year. A third 220,000-volt steel-tower line has been completed and placed in operation connecting the Chats Falls plant with the Leaside transformer station at Toronto. This includes transformer and switching equipment at the Chats Falls generating station and also at Leaside to take care of the power transmitted over this new line.

The prevailing depression did not, during the past year, permit the extent of growth which in recent years has characterized the industrial power load supplied by the local "Hydro" utilities of the Niagara system. Notwithstanding this, there was during the year a small increase in the aggregate industrial load supplied. The load in both domestic service and for commercial lighting purposes has been well maintained. In the rural power districts there has been an increase in load of about 15 per cent.



### **Dominion Power and Transmission System**

Progress has been made in connection with the properties formerly owned by the Dominion Power & Transmission Company, which Company, with subsidiaries, was purchased by the Commission in 1930. During the year the distribution system, substations and other properties of this Company situated in the city of Hamilton were sold to the Hamilton Hydro-Electric System, for \$2,125,000, and negotiations are being carried on with the Brantford Hydro-Electric System and the St. Catharines Public Utilities Commission for the purchase by them of the subsidiary companies in these cities. Arrangements have been made for transferring the rural distribution lines of the Dominion Power & Transmission Company to the established Hydro rural power districts in this general area. These changes will be completed early in the coming year.

### **Interruptible Off-Peak Power**

Although the Niagara System of the Commission has a high load-factor it has, of course, daily and seasonal peaks, thus there are periods of the day and of the year when large amounts of surplus "off-peak" power are available. When "off-peak" power is sold with the stipulation that the supply may be interrupted at the will of the vendor, it is termed "at will" or "interruptible" power. "Off-peak" power, however, on account of the uncertainty of the times and durations of the system peaks, is not sufficiently dependable for ordinary industrial uses. A limited amount of such power can be utilized by large special industries in certain heating and electro-chemical processes. The chief market for "at will" or "interruptible" power, however, is in adjacent territory served by power supply systems securing at least a large proportion of their power from steam plants or from hydro-electric plants using stored water. By utilizing when available this interruptible off-peak power, these systems can conserve their fuel supplies or their equivalent stored water.

From time to time during the year the Commission has been able to dispose of quantities of "at will" or "interruptible" off-peak power to the Canadian Niagara Power Company for use in the United States with arrangements that permit of its withdrawal at any time when required by Canadian industries. The sale of this power in the past has resulted in substantial revenue to the Niagara system, which revenue otherwise would not have been obtained. During the year 1931, however, due to adverse economic conditions, the amount of this class of power sold was very much reduced.

### **Engineering Assistance to Municipalities**

General engineering assistance was given during the year to practically all of the municipalities in the Niagara system, by a general supervision of management and operation, and also in connection with the construction and extension of distribution systems and stations. Certain municipalities received special engineering advice and assistance regarding a number of matters, which are more fully referred to as follows:

**Barton Township**—Negotiations have been completed with Barton township for the sale of its Hydro system, which will become part of the Saltfleet rural power district.

**Brampton**—Many circuits have been rebuilt to provide for increased loads in various parts of the town. Estimates were prepared covering removal of pole lines from the business portion of the main street.

**Brigden**—The street-lighting system was remodelled and additional equipment installed to accommodate the change from 100-watt to 200-watt lamps on Main street.

**Chatham**—The rebuilding of the Chatham substation with duplicate 4,000-volt bus and switches of high rupturing capacity, was commenced and will be completed early in the new year. Plans were made and approved for the building of the duplicate single-circuit, 26,400-volt line from the Kent transformer station, for the greater part of the distance on other poles. This line will therefore provide a supply over an independent pole line for part of the distance from Kent transformer station to the Chatham municipal station. The original double-circuit line will still be used for the remainder of the distance.

**Comber**—The secondary conductors on the main street were increased in size, and the trees on this section of the system were trimmed by the forestry specialists of the Operating department.

**Hamilton**—The distribution system of the Dominion Power and Transmission Company in Hamilton was taken over from this Commission by the Hamilton Hydro-Electric System, as of May 1, 1931. This will be operated as a separate system until such time as the frequency of the power supply is changed. At present, it is planned to make this change after a five-year period.

**Ingersoll**—Arrangements are being made for additional street-lighting units on Thames street. The changes proposed will make it possible to remove the wooden poles from the main business portion of this street. A new pole line, which adds greatly to the general appearance, has been erected on No. 2 highway running through the town.

**Lambeth**—The changes in the distribution system made necessary by the serving of this municipality from Glendale station instead of Delaware station, were completed during the year.

**Merritton**—Approval has been given for the erection of ornamental street lights on the main street and the removal of the service wires to the rear of the buildings. Assistance was also given in planning the revision of the distribution system throughout the municipality.

**Niagara Falls**—A study was made of the Niagara Falls Hydro system in connection with the issuing of debentures to cover additional station and feeder equipment. New ornamental lights have replaced regular lights on a number of streets.

**North York Township**—A station of 1,500-kv-a. capacity has been erected at Willowdale, approximately two miles north of the original York Mills station, to provide power for the northerly portion of the township, including the load of the North Yonge Radials which is a customer of the township. Heavy primary circuits have been erected from this station and from the old York Mills station, as these were badly needed to carry the rapidly increasing loads of the local Hydro system.

**St. Marys**—Following a vote on a by-law providing \$25,000 additional debentures, portions of the local system were rebuilt.

**St. Thomas**—A 13,200-volt extension to the east of the city to supply a new clay products plant with 250 horsepower was approved in October. This installation will be made early in the coming year and application has been made by the city to annex the property.

**Tavistock**—The secondary voltage of the distributing station was changed from 550 to 4,000/2,300 volts and the use of a step-up bank of transformers thus eliminated.

**Thedford**—The distribution system was remodelled and larger transformer capacities and larger secondary conductors were provided. All new equipment



installed is suitable for operation at 8,000 volts, as a change to this voltage is anticipated.

**Thorold**—A new electrically driven fire pump has been installed at the waterworks plant.

**Tillsonburg**—In order, at a later date, to be able to remove all poles for three blocks on the main street and install ornamental lighting standards, the secondary conductors in this area are being removed from the poles and erected on the faces of the buildings, the conductor size being increased. The transformers are mounted immediately around the corners off the main street. The town takes power at 13,200 volts and in the coming year its plans call for a remodelling of its step-down station.

**Wallaceburg**—The ornamental street-lighting system, consisting of fifty 300-watt multiple lamps in ornamental standards fed by an underground system, was completed and put in operation. A section of the distribution system was remodelled and larger transformers and larger secondary wires were installed to accommodate the increased load.

**Welland**—A new office building has been completed on Division street for the accommodation of the local commission and the staff of the rural power district.

### GEORGIAN BAY SYSTEM

There was a very satisfactory increase in power requirements of this system during the year. New substations were constructed for feeding new districts; the capacity of several existing substations was increased, and extensive expansion took place in rural districts as well as in Bruce county. There was a substantial increase in the territory actually served.

While the growth in power demand for urban municipalities of the Georgian Bay system did not equal the annual growth of previous years, this has been more than made up by the increased demand in the rural districts and by the added demands of the six urban and five township municipalities whose distribution systems were acquired from The Walkerton Electric Light & Power Company and The Saugeen Electric Light & Power Company. The most remarkable feature of load growth is noticeable in the summer resort districts included within the area of this system, and situated along the shores of Lake Huron, Georgian bay, and lake Simcoe, and throughout the Lake-of-Bays district, and as a result of this particular load the system peak in the month of August approximates that in the month of December, with the actual demand of the summer resort load being somewhat over 1,600 horsepower.

The Walkerton Electric Light & Power Company and The Saugeen Electric Light & Power Company acquired in 1930 from The Public Utilities Consolidated Corporation, a subsidiary of The W. B. Foshay Company of Minneapolis, were consolidated with the Georgian Bay system during the year. The towns of Southampton, Walkerton and Wiarton, the villages of Hepworth and Port Elgin, as well as the townships of Amabel, Brant, Carrick, Greenock and Saugeen were the municipalities directly affected by this change. The villages of Mildmay and Formosa are indirectly affected on account of the fact that although power in the latter is handled by private companies, the electrical energy is purchased from the Commission. All the incorporated municipalities with the exception of Hepworth, passed by-laws, executed agreements with the Commission, purchased their own distribution systems, and are now carrying on under local management. The rural districts and townships were organized into the Bruce



and Sauble rural power districts and are now being served in accordance with the legislation governing the distribution of power in rural power districts.

General engineering assistance and advice concerning the management and operation of the various local distribution systems, also assistance in connection with the application of rates and the submission of information to power and lighting customers was rendered to all of the municipalities throughout the district. Engineering advice of a special nature in connection with matters referred to was given to the following municipalities:

**Barrie**—The distribution system was reconstructed and changed from two-phase to three-phase, the work being performed by the local staff.

**Creemore**—The local distribution system was completely reconstructed to comply with present-day standards and existing load conditions, and the primary voltage was changed from 4,000 to 8,000 volts. The work was performed by the Construction Department of the Commission under plans and specifications prepared by the engineering staff.

**Grand Valley**—Plans and specifications were prepared and estimates submitted by the Commission covering a complete reconstruction of the distribution system to conform with present-day standards and existing load conditions. The actual work will be performed early next year.

**Port Elgin**—Enabling and Money by-laws covering a supply of power from the Commission were submitted to the ratepayers and carried. A contract for a supply of power was executed with the Commission and the local distribution system was taken over by the municipality and completely reconstructed.

**Rosseau**—A contract covering a supply of power was executed with the Commission and a new distribution system was constructed by the Commission for the municipality and placed in operation during the month of July.

**Southampton**—A contract was executed with the Commission covering a supply of power and the local distribution system was purchased from the Commission and placed under local management.

**Walkerton**—Enabling and Money by-laws were submitted to the ratepayers and carried, and a contract was executed with the Commission covering a supply of power. The distribution system was completely reconstructed with the assistance of the Commission's engineers and the Construction Department.

**Warton**—Enabling and Money by-laws were carried and a contract executed with the Commission covering a supply of power. The local distribution system was purchased from the Commission and completely reconstructed.

### EASTERN ONTARIO SYSTEM

This system includes the Central Ontario, St. Lawrence, Rideau, Ottawa and Madawaska districts and serves all eastern Ontario. The western boundary of the system is in Ontario county.

The power supply is from developments owned by the Commission on the Trent Canal system, Mississippi and Madawaska rivers. Power is also purchased in large blocks from the Cedar Rapids Power Company at Cornwall, and from the Gatineau Power Company near Ottawa. Some small blocks of power are also purchased at other points on this system. The future growth of load for this system has been arranged for under a contract with the Gatineau Power Company. The Commission also controls, or has an interest in, a number of undeveloped water-power sites on the Ottawa, Mississippi and Madawaska

rivers, power from which sites can be made available as warranted by the power demands. Owing to extremely low water conditions it was necessary to call on the Gatineau Power Company for the annual increment of 6,000 horsepower in September instead of October as provided for in the agreement and for the same reason additional power was obtained from the Cedar Rapids Power Company for short periods.

General engineering assistance was given to most municipalities and special assistance to the following in connection with the matters referred to:

**Arnprior**—Negotiations are under way in connection with the purchase by the corporation of the local distribution system.

**Bath**—This village entered into a contract with the Commission for a supply of power and will receive service early in November. A local distribution system is being constructed by the corporation.

**Belleville**—The main substation supplying power to Belleville was rebuilt and enlarged by the Commission.

**Bobcaygeon**—Requests were received from the village for a supply of power. Estimates were prepared on the cost of power and will be submitted at an early date.

**Bowmanville**—The necessary by-laws covering the purchase of the local distribution system from the Commission were passed on October 31, 1931.

**Cobourg**—Negotiations for the purchase of the Cobourg water and electric systems by the Corporation are proceeding.

**Deseronto**—The Corporation completed the purchase of the local distribution system from the Commission and took over the operation of the system on April 1, 1931.

**Hastings**—This village signed a contract with the Commission and received its first supply of power on May 28, 1931. The local distribution system was purchased from the Fowlds Company, Limited and was reconstructed for the corporation by the Commission.

**Newburgh**—This village has opened negotiations respecting the purchase of its local distribution system.

**Marmora**—The municipality has under consideration a new water-pumping station for fire protection.

**Petawawa**—The Dominion Government through the Department of National Defence, asked the Commission for the price of power for lighting purposes at Petawawa. This was furnished but the matter is held up temporarily.

**Peterborough**—Estimates were prepared and forwarded to the municipality in connection with a duplicate 44,000-volt line from Auburn station to Peterborough municipal station.

**Renfrew**—Due to a shortage of water on the Bonnechere river, the municipality of Renfrew again applied to the Commission for power. The Commission was able to assist it in the winter months.

**Stirling**—Improvements were made to the local substation.

**Tweed**—The Corporation completed the purchase of the local distribution system from the Commission and took over the operation of the system on May 1, 1931.

**Westport**—This municipality applied to the Commission for a supply of power in the fall of 1930, and the ratepayers voted favourably in January,

respecting entering into a contract with the Commission and constructing a distribution system. The line to feed Westport was constructed connecting with the Commission's Forfar station. This line and the distribution system constructed by the Commission, were put into service on November 14th, 1931.

### **THUNDER BAY SYSTEM**

The consumption of power in this district was substantially curtailed, due to the effect of the industrial depression on the grain trade and the pulp and paper industry, which normally utilize a large proportion of the power generated. The revenue however, has not fallen off in proportion to the power demand due to the collection of stand-by charges in the power rates, and therefore is not as much affected as the load conditions might suggest. Until these industries commence to show improvement, there will probably be no increased power demands in the district. The Alexander development was completed and all three units were placed in operation during the year.

Engineering assistance and advice covering the management and operation of the various distribution systems was given to the cities of Fort William and Port Arthur and to the village of Nipigon, which comprise this system.

### **NORTHERN ONTARIO SYSTEM**

#### **Nipissing District**

An agreement was entered into with The Abitibi Power & Paper Company covering a supply of emergency power from the Crystal Falls development on the Sturgeon river (formerly known as Smoky falls) and a new transmission line was constructed and placed in operation between North Bay and Sturgeon Falls. By this arrangement an additional supply of emergency power was made available to supplement the power developments on the South river during periods of low stream flow, thus assuring North Bay and the other municipalities of an adequate supply of power regardless of circumstances and conditions on the South river.

#### **Sudbury District**

The transmission line between Hunta and Copper Cliff was completed and placed in operation during the year and power was made available to The International Nickel Company. Power is obtained from The Ontario Power Service Corporation at approximately 110,000 volts at Hunta under a contract executed last year. The development is situated on the Abitibi river and the Commission is now in a position to supply the complete requirements of the mining industry in Northern Ontario. Assistance was given to the town of Capreol in making provision for a future supply of power, and money and enabling by-laws were submitted to the ratepayers and carried almost unanimously. Assistance was also given to the town of Thessalon in the matter of preparing a suitable schedule of rates for future operation.

#### **Patricia District**

This district is supplied with power from the development at Ear Falls at the foot of LacSeul, the only customer at the present time being a large gold mine. Assistance was given this customer throughout the year in connection with the utilization of power.





#### RURAL ELECTRICAL SERVICE IN ONTARIO

One of the Waterloo county farms, through the hollow of which flows a spring creek. Alongside of it are assembled the buildings. Layouts of this kind are often the subject of study of landscape architects. Thrifty people of the same family have each contributed a share to the development of this place as a home and well-tilled farm

### RURAL ELECTRICAL SERVICE

It is nearly twenty years since the Commission first supplied electrical service to rural consumers. In the earlier years this service was supplied to townships and for the most part the rural consumers were reached by extensions to existing urban and suburban distribution networks. By 1920, some 2,200 rural consumers were served, but the aggregate rural load was less than 500 horsepower. In 1920, amendments to The Power Commission Act provided for the formation of rural power districts and in 1921 and 1924 special rural Acts were passed by the Provincial Legislature providing for the payment of Provincial "grants-in-aid." These legislative enactments;\* the special consideration given to rural electrical service; and the experience gained and put into practice by the Commission, have resulted in a remarkable growth in rural electrical service in Ontario. This is well shown by the accompanying charts. There is, indeed, no branch of the Commission's activities to which, during recent years, more detailed consideration has been given than its department of rural electrical service.

Of the material factors which contribute to the healthy growth of modern communities none is more beneficial than an ample supply of low-cost electrical power. And this applies both to urban and rural centres. Certainly no other agency can contribute more to the maintenance of a standard of living which makes life in rural districts more attractive. The rural population of Ontario has therefore welcomed with enthusiasm the possibility of obtaining efficient

\*Re Rural Power District Legislation:—Consult *The Power Commission Act* (R.S.O. 1927, ch. 57); *The Rural Hydro-Electric Distribution Act* (R.S.O. 1927, ch. 59); *The Rural Power District Loans Act, 1930* (20 Geo. V, ch. 14), and *The Rural Power District Service Charge Act, 1930* (20 Geo. V, ch. 15).

lighting along with the advantages of a very flexible form of power supply such as are combined in "Hydro" rural service.

It must, however, be recognized that rural electrical service is essentially a community interest and to attain its greatest success must have the whole-hearted support of all rural dwellers. Co-operation is the keynote of success. Primarily, rural service is made possible by the great networks of transmission lines which have been constructed to serve urban municipalities. These networks afford a base from which rural primary lines may economically be extended over wide areas of the more closely settled parts of rural Ontario. Thus there is co-operation between the urban and rural citizens. The growth in the mileage of rural lines during recent years has been phenomenal, until at the present time the aggregate length of such lines exceeds the mileage of the main transmission lines built to serve urban centres. In the rural power districts the transmission lines which serve the individual farmers can also carry electrical energy to churches, schools and stores, as well as provide power for factories utilizing agricultural products as their raw material. Thus, co-operation produces the greatest benefit to all and results in lower costs.

The policy and practice of the Commission has been, and is, to make a distribution of electrical energy as widespread as possible, and to extend to every community that can economically be reached by transmission lines the benefit of electrical service. In harmony with this policy, the supplying of electrical service to rural districts has been undertaken according to a comprehensive and carefully thought-out programme. For the purpose of electrical service in rural Ontario, rural power districts are formed in the more closely settled portions of the Province traversed by transmission lines. A typical rural power district covers about 100 square miles. Its boundaries are not arbitrary geographical limits—such as define, for example, the areas of townships—but depend rather upon the economic distances which may be served from a distribution centre of city, town or village or other sources where suitable power is available. It should be appreciated that without such transmission networks as have been constructed to serve the cities and towns of the Province, any extensive rural electrification would be economically impracticable.

The experience gained by the Commission and the improvements in technique, enable electrical service to be given to rural districts when there can be secured three signed farm contracts, or their equivalent, per mile of line to be constructed.

Assistance respecting electrical service is given by the Province to farmers and rural residents in three ways, namely:

First—A grant-in-aid toward the initial capital cost of supplying electrical service, amounting to fifty per cent of the cost of line and secondary equipment necessary to deliver power from the supply point of city, town, village, etc., to the customer's property. This is the maximum amount provided for by the Rural Hydro-Electric Distribution Act.

Second—Authority has been granted by the Province to the Commission in *The Rural Power District Service Charge Act, 1931*, to fix a maximum service



RURAL ELECTRICAL SERVICE IN ONTARIO

Silo filling in the Baden district using a 5-horsepower electric motor on a farm adjacent to the birthplace of the late Sir Adam Beck. Nearly twenty years ago this farmer conceived the idea of making use of the water which flowed through his farm in a spring-supplied creek, to supply his power requirements and he developed it to the extent of a 10-kilowatt plant. In addition to lighting the buildings, he at that time installed a 5-horsepower motor in the barn. Difficulty was experienced, however, in starting the machinery and about five years ago when Hydro power became available to this district, this farmer was one of the first to appreciate its advantages. The clutch shown on this motor is the one formerly in use on the other motor.

charge for any class of service rendered by the Commission in a rural power district. Where as may be the case in newly established rural power districts such maximum service charge is not sufficient to meet the necessary cost of service, as specified by the Commission, the deficit is chargeable to and payable out of the Consolidated Revenue Fund of the Province. Payments made out of the Consolidated Revenue Fund for this purpose, on account of any rural power district, are charged to that rural power district in a special account—known as the “Rural Power Service Suspense Account”—in the books of the Treasurer of Ontario, and any surplus thereafter arising from any maximum service charge in that rural power district is to be paid to the Treasurer of Ontario and placed to the credit of the rural power district in such suspense account until the deficit is extinguished. Where a temporary deficit arises in any rural power district owing to the application of the maximum service charge, such maximum service charge must remain in force and be charged in that rural power district until the deficit is extinguished.

A tabulation set out on an accompanying page shows the present maximum service charge placed in effect on January 1, 1930.



Third—An Act—*The Rural Power District Loans Act, 1930*—to provide for granting aid towards the installation of electrical works in rural power districts was passed during the year 1930. The purpose of this Act is to provide advances towards the installation of electrical services in rural power districts, subject to regulations. Aid may be granted subject to such regulations and repayments, or the wiring from the transmission or distribution lines of the Commission into and throughout dwellings, farms, out-houses, and any other works which may from time to time be specified by the regulations. In addition to the wiring, loans may be obtained on transformers, motors, or other appliances, as may be necessary or expedient for any industrial, agricultural or domestic purpose which may be specified in the regulations.

#### Rural Loans

Following the passing of the Rural Power District Loans Act in 1930 the Ontario Government turned over the administration of this Act to the Commission and early in the year it was brought into operation.

Regulations prescribed by the Act for its administration were drawn up and approved by the Government. Under these Regulations the Commission is empowered to loan to rural Hydro consumers who are classed as farmers and who own their premises a sum of money not to exceed \$1,000 for the following purposes:

- (a) The erection of service line from roadway to the meter located on the farmer's premises;
- (b) Wiring of dwelling;
- (c) Wiring of barn;
- (d) Wiring of other buildings;
- (e) Purchase and installation of utility motor;
- (f) Purchase and installation of grain grinder;
- (g) Purchase and installation of pumping equipment;
- (h) Purchase and installation of milking machine;
- (i) Purchase and installation of electric washing machine.

The interest rate on such loans was set at 6 per cent per annum and the loans were made repayable in quarterly instalments of principal and interest.

Up to October 31, 1931, there have been received 126 applications for Loan. Of this number, approval to 23 applications has been withheld pending the receipt of evidence that obligations in the way of interest on mortgages or taxes outstanding at the time the applications were received are liquidated. Approval by the Commission has been granted to 74 applications for loan and the amounts applied for have been paid to the applicants. The remaining 29 applications are practically ready for approval.

The total amount of loans approved is \$23,542; the average amount of each loan is \$318.14. With respect to the 74 applications approved, the following Table shows the number of applications in which the different items enumerated in the Regulations were applied for, also the cost to the consumer of these items. In many cases the amount approved by the Commission was substantially less than the cost to the consumer as the consumer did not wish to borrow up to the



RURAL ELECTRICAL SERVICE IN ONTARIO

The horsesweep power was familiar in the past as one of the first forms of portable power for thrashing. This was largely superseded by steam engines, gasoline engines and tractors. There are, however, a few left in Ontario but these are rapidly being supplanted by the electric motor. The type of thrasher in use at this place could easily be driven by a 5-horsepower electric motor instead of the six teams.

full amount of the cost of his installation, and in some cases the amount asked for was in excess of what was finally agreed to as a loan:

Items applied for in connection with a total of 74 loans	Number of applications affected	Cost to consumers
Services.....	60	\$3,484.80
House Wiring.....	63	7,860.79
Barn and Building Wiring.....	60	6,160.49
Motors.....	16	1,545.30
Grain Grinders.....	15	2,489.50
Pumping Equipment.....	6	616.50
Milking Machines.....	2	675.00
Washing Machines.....	15	1,734.00
Total Cost.....		\$24,566.38

Of the 74 Loans approved the following Table shows the number of Loans approved for each term of years from one to ten years:

One Year Loans.....	1	Six Year Loans.....	3
Two " ".....	0	Seven " ".....	10
Three " ".....	3	Eight " ".....	7
Four " ".....	4	Nine " ".....	0
Five " ".....	19	Ten " ".....	27

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The assistance given by the Province in these several ways is in pursuance of a long-established governmental policy of promoting the basic industry of agriculture. This policy had previously found expression in the establishment of agricultural schools, colleges and experimental farms, in assistance for farm drainage, road building and in other ways. The grants-in-aid and guarantees



RURAL ELECTRICAL SERVICE IN ONTARIO

The well-equipped kitchen in the home of a farmer in the Baden district, in which the electric service results in great saving of labour. Other parts of this home and the barn are well provided for in electrically-driven, labor-saving power devices

thus given make it possible to extend hydro-electrical power service to those engaged in and connected with agricultural pursuits in less densely populated districts where otherwise such service would not be financially feasible.

The extent and effect of the Province's financial assistance with respect to the distribution of power in rural districts should be clearly understood. The Government grant-in-aid relates solely to the initial capital investment for distribution facilities in rural power districts only. Having made its grant-in-aid, the Government further participates in the operation of each district in that it guarantees a maximum service charge, otherwise its participation in the operation of the property ceases. Each rural power district not only pays the cost of operation, maintenance and administration of its lines, but also sets up reserves for renewals, obsolescence and contingencies on the whole of the equipment and lines, as well as for sinking fund on the investment made by the Commission on behalf of the townships served.

The aggregate load distributed to the rural dwellers is, and possibly must always be, but a relatively small proportion of the total energy distributed by the Commission. Therefore any benefit accruing to the urban municipalities as a result of the slightly enlarged scale of operations due to the Provincial grant-in-aid, is so small as to be negligible. There is, however, a broad community





RURAL ELECTRICAL SERVICE IN ONTARIO

A view from the air of the Provincial plowing match held this year at Peterborough, showing the tent city, the parking areas and fields in which the plowing contests were held. The Commission made a demonstration of electric power-using equipment such as might be used in rural and farm homes, barns and dairies

of interest between urban dwellers and agriculturalists, and the beneficial influence of rural electrical service on agriculture is reflected in the prosperity and welfare of the Province as a whole.

The accompanying diagrams illustrate the unprecedented expansion of rural primary-line extensions during the last eleven years, and the increase in the use of electricity by the farming communities of Ontario as shown by the aggregate peak loads. It is believed that further substantial progress will be made in the next few years. An outstanding reason for this growth is the extent to which the Commission has gained the confidence of the rural communities through efficiency in the construction of lines, through progressive reductions in rates and by a continuity of service which has contributed very materially to progress by inspiring confidence in the use of electrical power-driven machinery.

#### The Year's Activities

During the past year the amount of constructional work carried out in the rural power districts exceeded that of any year except the year 1930. Some 1,304 miles of primary transmission lines were constructed or under construction and electrical service was given to 8,886 additional consumers. The capital expenditure approved for rural construction work during the past year was

\$2,644,702, and the aggregate peak load in October, 1931, reached 31,790 horsepower. Details of these matters and of the present status of rural distribution are presented in the accompanying tables. For the coming year, arrangements have been made to construct about 1,200 miles of additional rural lines.

The engineers of the Commission attended, during the past year, a number of public meetings throughout the Province, held for the specific purpose of explaining to prospective consumers the rates at which electrical power could be supplied, the uses which can be made of power on the farm and the procedure necessary to obtain service. In all, sixty-five meetings were held. Where possible, moving pictures were shown, illustrating the uses of electricity on the farm. The provincial statutes relating to rural distribution were explained, pamphlets were distributed, and assistance was given to local committees appointed to canvass their respective districts.

The Commission also co-operated with the Provincial Department of Agriculture by giving similar talks to students taking short-course lectures at the Agricultural College at Guelph, and at other centres. Representatives of the Commission also attended provincial ploughing matches and arranged to give information to a large number of interested farmers. The manufacturers of electric motors and other equipment used in connection with power on the farm co-operated with the Commission in giving demonstrations at various places, showing actually how power can advantageously be employed by the farmer.

During the past year not only has the power taken by the rural power districts increased because of increased mileage of transmission lines and the demand of the consumer connected to these new lines, but the demand for power has also increased due to the greater use of electricity on the farms already served and due to the connection of new consumers to existing lines. Furthermore, many townships have installed—in districts where the conditions warrant—street-lighting systems on the public highways. To supply these increased loads, new substations have been constructed and the capacities and number of lines have been increased.

The tabulation on page 78 shows the extensions approved during the year, the number of consumers, the amounts of power supplied, the capital expenditures and the amounts of provincial grant-in-aid of rural lines approved by the Government.

#### **Rates for Rural Electrical Service**

Rates to rural consumers are based upon service “at cost”—proper account, of course, being taken of the Provincial grant-in-aid for rural work and the operation of the provision for a maximum service charge—and as in urban centres the rates are made up of two parts, a service charge and a consumption charge. In any given rural power district the service charge to a consumer depends primarily upon the individual connected load or demand which determines his class rating (see “Classification of Services”) but this is modified in the earlier years of operation of a rural power district by the provision respecting maximum service charge; the consumption charge is in the form of a first and second kilowatt-hour charge and is largely determined by the cost of power at the source of supply to the rural power district.





#### RURAL ELECTRICAL SERVICE IN ONTARIO

Prior to 1926 most of the cigarette or bright-leaf tobacco was brought into Canada to supply our requirements. Some enterprising farmers in Norfolk county in that year grew a field of tobacco at Lynedoch near Simcoe as an experiment. While the light sandy soil in that section is of little use for ordinary farming, the industry has grown so that there are now 20,000 acres under tobacco cultivation, the total crop being worth several millions of dollars. The Commission's engineers are investigating the possibilities of the application of Hydro-electric power to this new industry for water supply to green houses used to cultivate the young plants and for heat control of curing kilns and special lights for color grading, etc.

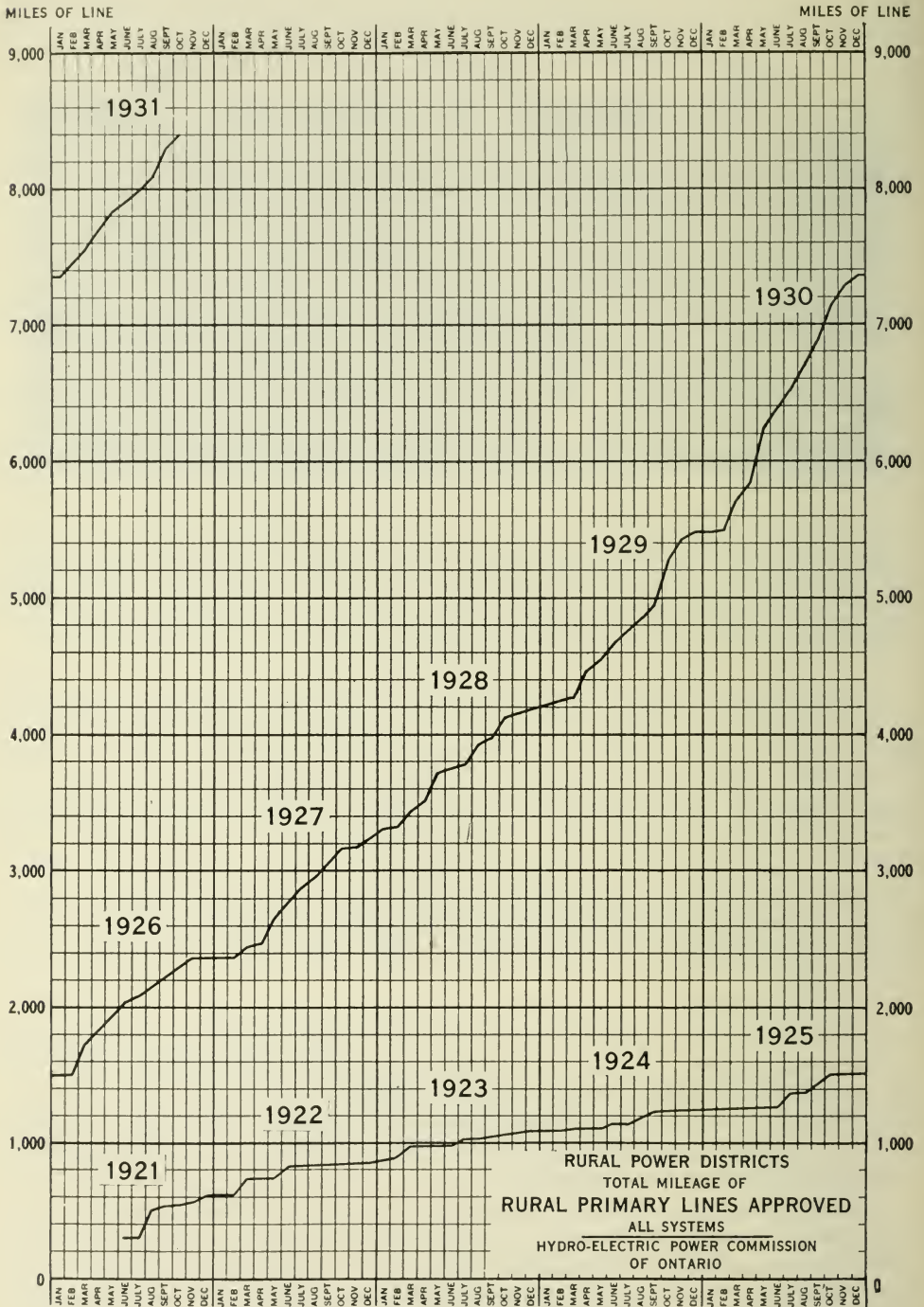
An important factor in connection with rural power supply is the stability of the rates charged. Since service is given at cost and since it is the policy to give service whenever economically practicable, it is necessary, in the interests of the rural consumers themselves, to ensure by contract a certain minimum return from each mile of line constructed. Otherwise, if one or two prospective consumers failed to take service, it would place an unfair burden upon those who did. Experience has led the Commission to adopt the safe policy of constructing rural lines only when sufficient contracts have been signed to guarantee payment of the fixed charges on their cost; the minimum signed contracts required being three ordinary farm contracts or their equivalent per mile of line constructed.

For the purpose of determining the service charge, each mile of line is assumed to represent a minimum of 15 units and to each class of service is assigned a value in such units. The accompanying Table gives this information and shows the annual and monthly service charges applicable to each class of service. It may be stated that more than 90 per cent of the contracts entered into for farm service are either of Class 2B or Class III. These, therefore, are the representative classes for individual farm service.

Rather more than half the consumers in rural power districts are grouped in hamlets or small villages closely identified with rural activities, and these consumers are usually in Class 1B or Class 1C. It should further be understood that rural power districts do not include suburban districts or larger villages. These have their own electrical utilities.

All new rural power districts begin at standard rural rates and these constitute the maximum rates submitted to the proposed consumers. As the average







number of consumers per mile of line increases, the service charges may be, and in practice have been, reduced; and with increased consumption the rates per kilowatt-hour are also lowered. Thus, in older-established rural power districts the total cost of service is much below the initial standard rates.

At the end of this section is given a tabulation of the rural power districts established in connection with the several systems of the Commission, which shows the miles of line, the number of consumers and the rate schedules for each district.

## RURAL LINE EXTENSIONS DURING THE YEAR 1931

System	Miles of primary line	Number of consumers			Power supplied in October, 1931	Capital approved for extensions	
		Hamlet	Farm	Total		Total	Provincial grant-in-aid
Niagara.....	797.97	2,583	3,025	5,608	25,099	\$ 1,735,972.89	c. \$ 844,706.44
Georgian Bay.....	168.67	722	363	1,085	1,750	291,019.65	145,509.82
Eastern Ontario.....	267.39	1,466	625	2,091	4,873	586,341.48	293,170.74
Thunder Bay.....	9.00	15	21	36	.....	17,439.00	8,719.50
Northern Ontario..	5.99	54	12	66	68	13,929.00	6,964.50
Total.....	1,249.02	4,840	4,046	8,886	31,790	2,644,702.02	1,299,071.00

## SUMMARY OF RURAL LINE EXTENSIONS

As Approved by the Commission from June 1, 1921, to October 31, 1931

System	Miles of primary line	Number of consumers			Capital approved for extensions	
		Hamlet	Farm	Total	Total	Provincial grant-in-aid
Niagara.....	6,235.52	20,779	20,330	41,109	\$ 13,745,546.83	c. \$ 6,849,493.41
Georgian Bay.....	689.24	3,121	1,463	4,584	1,382,197.01	664,846.02
Eastern Ontario.....	1,459.24	6,047	3,569	9,616	3,202,029.79	1,601,014.89
Thunder Bay.....	9.00	15	21	36	17,439.00	8,719.50
Northern Ontario.....	10.99	233	23	256	33,497.00	16,748.50
Total.....	8,403.99	30,195	25,406	55,601	18,380,709.63	9,140,822.32

## SERVICE CHARGES IN RURAL POWER DISTRICTS—AS AT JANUARY 1, 1931

With Provincial Grant-in-Aid—25-cycle and 60-cycle Service

Class of rural service	Units per consumer*	Approx. number of customers per mile of line	Demand allowed consumer in k-w.	Kilowatt-hours per month at first rate	Gross annual service charge	Gross monthly service charge	Net annual service charge	Net monthly service charge
1B	2.25	6.8	0.75	30	\$ 18.00	\$ 1.50	\$ 16.20	\$ 1.35
1C	3.75	4.0	2.0	30	27.96	2.33	25.20	2.10
2A	1.90	8.0	1.0	30	20.64	1.72	18.60	1.55
2B	3.50	4.3	2.0	30	27.96	2.33	25.20	2.10
3	5.00	3.0	3.0	42	33.36	2.78	30.00	2.50
4	5.35	2.8	5.0	70	36.00	3.00	32.40	2.70
5	7.50	2.0	5.0	70	50.04	4.17	45.00	3.75
6A	12.50	1.2	9.0	126	62.04	5.17	55.80	4.65
6B	12.50	1.2	9.0	126	70.68	5.89	63.60	5.30
7A	20.00	0.74	15.0	210	92.64	7.72	83.40	6.95
7B	20.00	0.7	15.0	210	111.36	9.28	100.20	8.35

\* Before a rural primary line is constructed contracts equivalent to 15 primary units per mile must be signed. (For explanation of units see accompanying text.) Thus three Class 3 consumers at 5 units each equals 15 units. Service charges are adjusted so that each class of service bears its equitable share of the cost.



## CLASSIFICATION OF SERVICES FOR RURAL POWER DISTRICTS

When contracts between the consumer and the township have been executed, users of power in townships are supplied with electric service under general classes with limitations as follows:

Class	Service	Class demand kilowatts	Phase	Volts	Fuse rating amperes (maximum)
1B	Hamlet Lighting . . . . .	0.75	1	110	15
1C	" " " " " "	2	1	220/110	35
2A	House Lighting . . . . .	1	1	110	20
2B	Small Farm Service . . . . .	2	1	220/110	35
3	<b>Light Farm Service.</b> . . . .	<b>3</b>	<b>1</b>	<b>220/110</b>	<b>35</b>
4	Medium Farm Service . . . . .	5	1	220/110	50
5	" " " " " "	5	3	220/110	35
6A	Heavy Farm Service . . . . .	9	1	220/110	100
6B	" " " " " "	9	1 and 3	220/110	60
7A	Special Farm Service . . . . .	15	1	220/110	According to load
7B	" " " " " "	15	1 and 3	220/110	According to load

**Class I: Hamlet Service**—Includes service in hamlets, where four or more consumers are served from one transformer. This class excludes farmers and power users. Service is given under two sub-classes as follows:

**Class 1-B:** Service to residences or stores. Use of appliances over 750 watts permanently installed is not permitted under this class.

**Class 1-C:** Service to residences or stores with electric range or permanently installed appliances greater than 750 watts. Combinations of residence and store supplied from one service shall be not less than Class 1-C. Special or unusual loads will be treated specially.

**Class II-A: House Lighting**—Includes service to all residences that cannot be grouped as in Class I. This class excludes farmers and power users.

**Class II-B: Farm Service, Small**—Includes service for lighting of buildings and power for miscellaneous small equipment and power for a single-phase motor not exceeding 2 horsepower or an electric range (motor and range not to be used simultaneously) on a small farm of fifty acres or less.

Class III: Farm Service, Light—Includes service for lighting of farm buildings, power for miscellaneous small equipment, power for single-phase motors not exceeding 3 horsepower and electric range. Range and motor are not to be used simultaneously.

**Class IV: Farm Service, Medium Single-Phase**—Includes service for lighting of farm buildings and power for miscellaneous small equipment, power for single-phase motors up to 5-horsepower demand or an electric range. Range and motor are not to be used simultaneously.

**Class V: Farm Service, Medium 3-Phase**—Includes service for lighting farm buildings and power for miscellaneous small equipment, power for 3-phase motors, up to 5-horsepower demand, or an electric range. Range and motor are not to be used simultaneously.

**Class VI:** Farm Service, Heavy—Includes service for lighting of farm buildings and power for miscellaneous small equipment, power for motors up to 5-horsepower demand and an electric range, or 10-horsepower demand without an electric range. Single- or three-phase service will be given at the discretion of the Hydro-Electric Power Commission of Ontario.

**Class VII: Farm Service, Special**—Includes service for lighting of farm buildings, power for miscellaneous small equipment, power for 3-phase motors from 10- to 20-horsepower demand and electric range. Single or three-phase service will be given at the discretion of the Hydro-Electric Power Commission of Ontario.

Note: Class IIB is the service usually supplied to small farms of fifty acres or less and Class III is the service usually supplied to ordinary farms of larger size. More than 90 per cent of new contracts for farm service are in one or other of these two classes.

# RURAL POWER DISTRICTS—MILES OF LINE, NUMBER OF CONSUMERS AND RATES—OCTOBER 31, 1931

## NIAGARA SYSTEM

Rural power district	Miles of line	No. of consumers	Rural rates											Gross consumption charge		Prompt payment discount	
			Class and gross monthly service charge											1st 14 hrs. use of class demand min. 30 kw-hrs.	All additional		
			1B	1C	2A	2B	*3	4	5	6A	6B	7A	7B				
N5	D1	21	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.	cents	cents	%
Acton.....	8.63		1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	10	
Ailsa Craig.....	5.80	16	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6.5	2	10	
N18	D9	8	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	7	2	10	
N15	D3	542	1.30	2.33	1.60	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	3.5	2	10	
N11	D2	580	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4.5	2	10	
N12	D4	74	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4	2	10	
N7	D1	375	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	3	1.5	10	
N1	D4	1,216	1.35	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	3.5	2	10	
N15	D2	360	1.35	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4	2	10	
N14	D3	300	1.45	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4	2	10	
N3	D3	1,332	1.10	1.98	1.46	1.98	2.36	2.55	3.54	4.39	5.01	6.56	7.89	3	1.5	10	
N14	D10	130	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	10	
N13	D2	43	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4	2	10	
N12	D1	107	1.45	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	3	1.5	10	
N18	D8	32	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	7	2	10	
N12	D2	50	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4.5	2	10	
N2	D5	93	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4	2	10	
N14	D1	136	1.45	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	3.5	2	10	
N1	D7	20	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	3.5	2	10	
N8	D11	64	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	10	
N4	D3	119	1.35	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4	2	10	
N4	D1	108	1.35	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4	2	10	
N14	D12	24	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10	
N12	D5	50	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4	2	10	
N2	D1	86	1.30	2.21	1.63	2.21	2.64	2.85	3.96	4.91	5.60	7.33	8.82	3	1.25	10	
N1	D9	62	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	10	
		†	1.00	1.86	1.38	1.86	2.22	2.40	3.34	4.14	4.71	6.18	7.42	3.5	2	10	

Dutton.....	N11	D3	44.63	165	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Elmira.....	N7	D3	18.12	75	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4	2	10
Elora.....	N5	D4	44.19	248	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4	2	10
Essex.....	N15	D7	83.62	425	1.35	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4.5	2	10
Exeter.....	N4	D6	63.94	561	1.45	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	10
Forest.....	N18	D6	36.92	137	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Galt.....	N6	D2	38.03	290	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	3	1.5	10
Georgetown.....	N5	D2	48.72	242	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4	2	10
Godertich.....	N8	D2	35.26	151	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	10
Grantham.....	N1	D2	56.43	733	1.00	1.50	1.25	1.86	2.22	2.40	3.34	4.14	4.71	6.18	7.42	3	1.5	10
Guelph.....	N5	D3	87.72	518	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	3	1.5	10
Haldimand.....	N2	D8	48.01	241	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4.5	2	10
Harrison.....	N8	D5	23.17	59	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	10
Harrow.....	N15	D4	66.84	588	1.45	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4.5	2	10
Ingersoll.....	N10	D3	173.30	578	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5.5	2	10
Jordan.....	N1	D3	33.71	348	1.05	1.86	1.38	1.86	2.22	2.40	3.34	4.14	4.71	6.18	7.42	3	1.5	10
Keswick.....	N3	D5	48.72	888	1.20	2.10	1.55	2.10	2.50	2.70	3.75	4.65	5.30	6.95	8.35	4	2	10
Kingsville.....	N15	D5	115.10	1,318	1.00	1.80	1.25	1.98	2.36	2.55	3.54	4.39	5.01	6.56	7.89	3	2	10
Listowel.....	N8	D8	54.50	259	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4	2	10
London.....	N4	D2	183.51	1,961	.90	1.65	1.15	1.75	2.22	2.40	3.34	4.14	4.71	6.18	7.42	3	1.5	10
Lucan.....	N4	D5	31.89	126	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Lynden.....	N2	D2	44.69	235	1.45	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4	2	10
Markham.....	N3	D1	98.23	737	1.35	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4	2	10
Merlin.....	N14	D15	79.95	304	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	10
Milton.....	N13	D3	56.17	299	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4	2	10
Milverton.....	N8	D9	34.73	147	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4	2	10
Mitchell.....	N8	D7	65.40	328	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4.5	2	10
Newmarket.....	N3	D4	53.91	296	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4	2	10
Niagara.....	N1	D1	50.97	285	1.20	2.15	1.63	2.21	2.64	2.85	3.96	4.91	5.60	7.33	8.82	3	1.5	10
Norwich.....	N10	D1	102.96	438	1.35	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	3.5	2	10
Oil Springs.....	N18	D3	17.08	110	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Palmerston.....	N8	D6	33.01	102	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4	2	10
Petrolia.....	N18	D5	13.96	56	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Preston.....	N6	D1	121.18	936	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	3	1.25	10

\*See footnote on page 79.

†Lowbanks extension.

‡Suburban area.



# RURAL POWER DISTRICTS—MILES OF LINE, NUMBER OF CONSUMERS AND RATES—OCTOBER 31, 1931

## NIAGARA SYSTEM—Continued

Rural power district	Miles of line	No. of consumers	Rural rates													Gross consumption charge		Prompt payment discount
			Class and gross monthly service charge															
			1B	1C	2A	2B	3*	4	5	6A	6B	7A	7B	cents	cents			
			\$	c.	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.	%	
N14 D2	92.90	703	\$ 1.35	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	4	2	10		
N7 D2	63.05	357	\$ 1.50	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	3	1.5	10		
N9 D1	103.62	397	\$ 1.50	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	5	2	10		
N11 D1	149.70	1,051	\$ 1.35	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	3	1.5	10		
N17 D1	97.99	1,483	\$ 1.35	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	3	1.5	10		
N15 D1	125.92	2,127	\$ 1.00	1.86	\$ 1.38	1.86	\$ 2.22	2.40	\$ 3.34	4.14	\$ 4.71	6.18	7.42	3.5	1.5	10		
N18 D4	87.17	1,132	\$ 1.35	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	3.5	2	10		
N3 D2	71.24	573	\$ 1.50	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	4	2	01		
N8 D10	18.25	146	\$ 1.10	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	4	2	10		
N12 D6	61.27	313	\$ 1.50	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	4	2	10		
N1 D6	10.88	297	\$ 1.30	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	3	1.5	10		
N8 D4	32.60	219	\$ 1.35	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	3.5	2	10		
N4 D4	71.24	209	\$ 1.50	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	6	2	10		
N13 D1	86.94	381	\$ 1.50	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	3.5	2	10		
N8 D1	68.99	275	\$ 1.45	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	5	2	10		
N14 D11	62.25	265	\$ 1.50	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	6	2	10		
N14 D14	45.10	237	\$ 1.50	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	5	2	10		
N10 D4	106.51	551	\$ 1.50	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	3.5	2	10		
N14 D13	80.01	521	\$ 1.35	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	4	2	10		
N12 D7	66.63	331	\$ 1.50	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	6	2	10		
N8 D3	38.36	238	\$ 1.50	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	6	2	10		
N2 D3	63.65	829	\$ 1.20	2.10	\$ 1.55	2.10	\$ 2.50	2.70	\$ 3.75	4.65	\$ 5.30	6.95	8.35	3	1.25	10		
N12 D3	63.39	269	\$ 1.50	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	5	2	10		
N18 D7	15.00	55	\$ 1.50	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	7	2	10		
N1 D5	263.34	2,456	\$ 1.00	1.86	\$ 1.38	1.86	\$ 2.22	2.40	\$ 3.34	4.14	\$ 4.71	6.18	7.42	3	2	10		
N16 D1	176.06	905	\$ 1.45	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	3	2	10		
N10 D2	123.45	630	\$ 1.30	2.33	\$ 1.72	2.33	\$ 2.78	3.00	\$ 4.17	5.17	\$ 5.89	7.72	9.28	3	2	10		

Total, Niagara System, \$9,996.14; 41,109. \*See footnote on page 79.

GEORGIAN BAY SYSTEM

Alliston.....	S32	D1	21.98	126	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	8	2	10
Arthur.....	E13	D2	2.40	8	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	8	2	10
Bala.....	GB13	D1	31.76	178	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	10
Barrie.....	S4	D1	52.00	393	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	10
Beaumaris.....	M7	D1	20.48	186	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	10
Beaverton.....	W2	D1	6.05	35	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Beeton.....	S33	D1	.33	1	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	8	2	10
Bradford.....	S37	D1	23.79	69	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	8	2	10
Bruce.....	E19	D1	39.35	155	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	†5	2	10
Buckskin.....	S24	D1	.94	14	1.80	3.30	2.25	3.45	4.55	4.75	5.75	7.35	8.30	10.90	13.20	8	2	10
Cannington No. 1	W3	D1	3.46	24	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Cannington No. 2	W3	D2	5.30	24	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Chatsworth.....	E3	D1	.00	22	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	8	2	10
Cookstown.....	S35	D1	.50	2	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	8	2	10
Creemore.....	S10	D2	20.80	90	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	10
Elmvale.....	S7	D1	25.35	151	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5.5	2	10
Flesherton.....	E1	D1	1.56	25	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6.5	2	10
Georgina.....	W2	D2	11.30	112	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Hawkestone.....	S9	D1	25.31	132	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	3	1.5	10
Holstein.....	E7	D1	.70	7	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	8	2	10
Huntsville.....	M2	D1	15.00	65	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	10
Innisfil.....	S31	D1	24.93	364	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6.5	2	10
Lucknow.....	E24	D1	10.10	2	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	8	2	10
Mariposa.....	W9	D1	47.30	298	1.35	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Markdale.....	E1	D2	13.87	55	1.20	2.20	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Meaford.....	E14	D1	.76	4	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	7	2	10
Medonte.....	S18	D1	8.37	48	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	10
Midland.....	S1	D1	12.33	41	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	10
Neustadt.....	E8	D1	.63	3	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	10
Nottawasaga....	S5	D1	7.84	89	1.25	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	10
Orangeville.....	E12	D1	19.30	62	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Owen Sound....	E2	D1	1.84	18	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	10
Port Perry.....	W12	D1	45.75	300	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Ripley.....	E24	D2	3.55	11	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	8	2	10
Sauble.....	E46	D1	10.00	41	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10

†Greenbank extension.

†Walkerton quarry section.

# RURAL POWER DISTRICTS—MILES OF LINE, NUMBER OF CONSUMERS AND RATES—OCTOBER 31, 1931

## GEORGIAN BAY SYSTEM—Continued

Rural power district	Miles of line	No. of consumers	Rural rates												Gross consumption charge		Prompt payment discount
			Class and gross monthly service charge														
			1st 14 hrs. use of class demand min. 30 kw-hrs.														
			1B	1C	2A	2B	3*	4	5	6A	6B	7A	7B	cents	cents	All additional	
			\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	%	%	
Shelburne.....	6.84	24	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	2	10
Sparrow Lake...	26.98	192	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4	2	2	10
Tara.....	21.95	112	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	7	2	2	10
Thornton.....	7.50	31	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	8	2	2	10
Utterson.....	18.01	85	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	8	2	2	10
Uxbridge.....	58.86	205	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	2	10
Wasaga Beach...	12.82	512	1.25	3.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	2	2	10
Wroxeter.....	34.89	268	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	8	2	2	10

Total, Georgian Bay System, 692.78; 4,584.

\*See footnote on page 79.

## EASTERN ONTARIO SYSTEM

Alexandria.....	19.85	94	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	7	2	2	10
Amprior.....	4.50	44	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	2	10
Belleville.....	73.41	614	1.20	2.15	1.45	2.25	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4	2	2	10
Boymanville.....	26.70	116	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	2	10
Brighton.....	10.01	61	1.35	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	2	10
Brockville.....	89.36	594	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	2	10
Campbellford....	22.10	77	1.20	2.15	1.50	2.25	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	2	10
Chesterville.....	46.95	332	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	2	10
Cobourg.....	78.54	410	1.35	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	2	10
Colborne.....	22.00	125	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	2	10
Fenelon Falls....	18.06	116	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	2	10
Iroquois.....	80.89	404	Special.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kemptville.....	5.41	40	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	2	10
Kingston.....	92.85	592	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	2	10
Lakefield.....	16.90	70	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	2	10



Lindsay.....	C29	D1	4.46	24	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Omenee.....	C26	D1	3.00	2	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Martintown.....	L13	D1	19.44	134	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	7	2	10
Maxville.....	L14	D2	57.62	369	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	*7	2	10
																{6	2	10
Millbrook.....	C25	D1	18.95	96	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Napanee.....	C43	D1	93.98	441	1.35	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	10
Nepean.....	T1	D1	166.67	1,009	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	3	1.5	10
Newcastle.....	C22	D1	24.25	119	1.35	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Norwood.....	C31	D1	7.75	54	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Oshawa.....	C24	D1	91.59	1,424	1.00	1.86	1.38	1.86	2.22	2.40	3.34	4.14	4.71	6.18	7.42	3.5	2	10
Perth.....	H2	D1	13.00	49	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Peterboro.....	C20	D1	55.99	972	.63	1.16	.79	1.21	1.59	1.66	2.01	2.57	2.91	3.81	4.62	4	2	10
Pictou.....	C46	D1	.30	1	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Prescott.....	L2	D1	37.98	201	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	7	2	10
Renfrew.....	QM16	D1	5.50	9	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Smiths Falls.....	H3	D1	47.02	301	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Stirling.....	C35	D1	28.96	107	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	10
Trenton.....	C3	D1	41.55	193	1.35	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	5	2	10
Warkworth.....	C49	D1	.33	6	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Wellington.....	C45	D1	88.86	362	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10
Williamsburg.....	L7	D1	11.27	54	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	7	2	10

Total Eastern Ontario System, 1,426.00; 9,616.

\*Apple Hill Section.

THUNDER BAY SYSTEM

Port Arthur....	P2	D1	9.00	36	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	4	2	10
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NORTHERN ONTARIO SYSTEM

North Bay.....	Z4	D1	9.03	250	1.10	2.00	1.35	2.10	2.78	3.00	4.17	5.17	5.89	7.72	9.28	7	2	10
Powassan.....	Z8	D1	2.00	6	1.50	2.33	1.72	2.33	2.78	3.00	4.17	5.17	5.89	7.72	9.28	6	2	10

Total Northern System, 11.03; 256.

Total, all systems: Miles of line, 8,134.95. Number of consumers, 55,601.

## SECTION IV

### HYDRAULIC ENGINEERING AND CONSTRUCTION

The largest single item of hydraulic work during the year was the completion, to the initial operating stage, of the Chats Falls development. The completion of such a development in two years, the time used in this instance, is exceptional, as the ultimate development is of a size that exceeds any other in the Province of Ontario, except the Queenston-Chippawa development on the Niagara river. A condition of low river flow existed throughout the construction period, both of the spring freshets being exceptionally low, and favoured uninterrupted progress.

There are four units, of 28,000 horsepower, operating at present, and work is proceeding on the installation of four more units. Headworks of the two units situated at each end of the generating station have been completed, but the units themselves, viz., No. 1 and No. 10, will not be installed until some future date, when storage work on the main river and tributaries has progressed sufficiently to assure the necessary water supply for them. An account of the progress of the work and a description of the development are given below.

One new bridge and the reconstruction of a portion of a second were two items of importance in connection with the Queenston-Chippawa development that were proceeded with during the year. The first of these is the Queen Street bridge in the village of Queenston, and the second item refers to the new approach span for the Chippawa highway bridge. In addition to these, a large number of matters of minor importance in the Niagara district received attention, among which might be mentioned the completion of work in connection with the concrete envelope around conduit No. 3 at the Ontario Power plant, with the restoration of park lands; and the improvement of the area north of the screen house at the Queenston plant by the removal of all construction plant and buildings, and the grading and seeding of the area.

In the Georgian Bay system, improvements and repairs were made at the Big Chute plant on the Severn river and at the South Falls plant on the South Muskoka river. Investigation of a number of storage sites and prospective developments proceeded.

#### NIAGARA SYSTEM

##### Queenston-Chippawa Development

At the time of construction of the Queenston-Chippawa development, the township of Niagara approved of the construction of a temporary timber structure

to carry Queen street, in the village of Queenston, over the railway to the power house, on the understanding that a permanent bridge would replace the temporary structure when the useful life of the latter had ended. The condition of the bridge timbers this year was such that it became advisable to replace the whole bridge rather than to attempt to keep it in service by repairs, as these would have been very extensive. In other words, the bridge had reached the end of its useful life.

The new structure now being built has a length of 100 feet 6 inches, in three equal spans, on concrete abutments, with two intermediate structural steel bents. The deck is of reinforced concrete, and provides a 20-foot roadway and one 6-foot sidewalk. Construction work on the bridge commenced in October, and is proceeding.

Since the completion of unit No. 10, improvements have been progressing on the grounds north of the screen house, on which sand and stone storage and construction equipment and buildings had been located since the commencement of work on the development. The whole area has been cleaned up, graded and seeded, thus providing an attractive approach to the development from the north.

At the north end of the power house, the cliff was scaled, to protect the building from damage due to the falling of loose rock. Some material was removed from the tailrace of No. 10 unit, and balconies and stairways were completed.

As an unemployment relief measure, canal slopes were trimmed and improved where it was advantageous to do so, inspection and minor repairs to bridges were made, and the control gate and Chippawa highway bridge were painted. For the last-named structure also, a new approach span was designed, and repairs were made on the south abutment.

#### **Ontario Power Plant**

The construction of the concrete envelope for conduit No. 3 was completed at the end of the last fiscal year, except for back-filling and grading. Material for back-filling was obtained from the disposal area on the west side of the park, where spoil was deposited from the trench excavated for the conduit at the time of its construction. The whole area, after back-filling was completed, was graded, seeded and restored to a condition satisfactory to the Park Commission. Some relief to unemployment in the district was accorded by changing the personnel of construction gangs at stated intervals.

#### **Decew Falls Plant—Dominion Power and Transmission System**

Hydraulic tests were made on two units at the Decew Falls plant. One of the units tested was subsequently equipped with new runner and seal rings. The tests show the units to have a satisfactory efficiency. In fact, an equally high efficiency was attained in these tests as at the time of their installation. Unit No. 7, in which the new runner was installed by the Operating department, showed a gain of 5 per cent, due to the renewals, and a maximum turbine efficiency of 88 per cent, a very satisfactory result, as this unit was installed in 1903.



### Chats Falls Development

The Chats Falls development on the Ottawa river, which commenced carrying commercial load in October, is unique in several respects. It is the first complete development on the interprovincial section of the river, and in point of size is among the leading plants of the country. A brief description of the hydraulic portions of the development follows.

The development is situated on the Ottawa river about thirty-six miles upstream from the city of Ottawa. At this point the river drains an area of 34,000 square miles and has an average flow of 45,000 cubic feet per second, rising in times of extreme flood to 220,000 cubic feet per second, and falling as low as 12,000 cubic feet per second. Storage works already constructed have raised the minimum flow, so that it is expected that in future the flow will never be less than 22,000 cubic feet per second. Further storage development on the main stream and tributaries will eventually make available a dependable flow of 28,000 cubic feet per second.

The conditions at Chats falls are particularly favourable for an economical development, notwithstanding the great length of the dam required. The river banks at the dam site being low, it was necessary to extend the wings of the dam upstream for some distance on each side. Thus the dam is "U" shaped in plan, with a crest more than three miles in length, but nowhere of great height. The average head developed is 53 feet. At high stages of river flow the head will be reduced considerably, and the operating head will fluctuate between a maximum of 58 feet and a minimum of 38 feet. The structures have been designed for a regulated water level at the plant of elevation 247, Geodetic Survey datum.

The Ottawa river in this section consists of two lake expanses, united by the narrower reach in which the falls occur. The upper one is Chats lake and the lower one lake Deschenes. Normally, the difference in elevation between these lakes was 50 feet, made up by a gradient of 12 feet in the stretch of three miles from the outlet of Chats lake to Chats falls, and a drop of 38 feet at the falls. The additional head will be obtained by raising Chats lake to the normal high water level.

A section of the Canadian National Railways, two and one-half miles long between the dam and Chats lake, was diverted further inland to escape flooding due to the raising of the water level.

#### Dam Structures and Control Sluiceways and Gates

The structures comprising the main dam, commencing on the Ontario shore, consist of an earth dyke, 4,500 feet long, followed by bulkhead and sluiceway sections reaching to the generating station at Mohr island. Beyond this are four sluice gates, a log slide, and again a great length of bulkhead and sluiceway section. The total length of the bulkhead and sluiceway sections is 12,100 feet. The earth dyke was constructed of clay, well compacted by rolling, and amply protected from wave action by heavy riprap. It is keyed to the concrete gravity dam by a specially designed concrete section. On the Quebec bank, which is rocky, the dam ends in a series of short low concrete walls.



CHATS FALLS DEVELOPMENT—OTTAWA RIVER

Earth-fill dam under construction

Ragged Chute sluices from down-stream side

Cofferdam and improvements at outlet of Chats Lake



Two concrete dams, one provided with two stop-log sluices, were required to close off the Mississippi snye, a high-water channel of the Mississippi river which joins the Ottawa river near the power site.

The seventy-four sluices in the main dam on the Ottawa river are 18 feet wide, with sills 22 feet below regulated water level. They are divided into four sections, with forty-two sluices on the Ontario side of the generating station, and thirty-two on the Quebec side. Timber stop-logs are used in these sluices, and a travelling stop-log winch is provided at each section to handle the logs.

The sluice gate section immediately adjoining the power house, on the Quebec side, contains four steel gates, 25 feet high by 40 feet wide, with a timber sheeted housing on the back. These gates and also the checks in which they operate are provided with heaters to assure ease in winter operation. An intake section, with a 30-foot wide opening, has been built to accommodate a log slide.

The gravity section of the dam has a top width of 5 feet at elevation 250. The upstream face is vertical, while the downstream face is vertical down to elevation 245, and slopes at a batter of 8:12 below this point. On the upstream side the dam is provided with a railing; and lighting standards, approximately 72 feet apart, are provided from the power house to the further sluices on each side.

Channel improvements are being carried out at the outlet of Chats lake to reduce the loss between the lake and the power house, and, due to these improvements, the level of Chats lake during high floods and with the dam wide open will be lower than under natural conditions.

### Headworks

The intake structure, or headworks, contains three water passages for each of the ten units. The main piers between units are 7 feet thick and 62 feet from centre to centre, while two intermediate piers, 5 feet thick, form the water passages, which are 15 feet wide and 40 feet high at the racks, the sills being at elevation 195. At the headgates this section is reduced to 15 by 23 feet.

Steel headgates of the fixed roller type, operated by cable hoists, are provided for cutting off the supply of water to the units, and checks for emergency steel gates are located between the racks and the headgates. The housing, which encloses the hoists, forms an integral part of the power house superstructure. A travelling gantry crane, operating on the deck of the headworks, is provided to handle racks, emergency gates and other equipment.

### Power House

The power house is placed with the centre line on the interprovincial boundary and, as at present constructed to accommodate eight units, four on each side of the boundary, has a total length of 500 feet. For the two end units, No. 1 and No. 10, the headworks section only has been built. The substructure encloses the concrete scroll cases and elbow-type draft tubes. The floor of the scroll case is at elevation 191, and the bottom of the draft tube outlet is at elevation 156.25. The throat of the draft tube has a diameter of 16 ft. 3 in., and its section gradually changes to form two rectangular openings, 24 feet wide and  $17\frac{1}{2}$  feet high, separated by a central pier 6 feet thick. Piers, 8 feet in





CHATS FALLS DEVELOPMENT—OTTAWA RIVER

Ragged Chute sluices from up-stream side of dam looking towards power house

thickness, divide the units. The draft tubes project 30 feet beyond the downstream wall of the power house, and the piers are carried up to elevation 200, where they are spanned by a concrete deck carried on steel beams. Checks for steel gates are provided for unwatering the draft tubes.



CHATS FALLS DEVELOPMENT—OTTAWA RIVER

Forebay from the Quebec side showing entrance to log-slide at left, sluice-gates and power house headworks

In the upper part of the substructure, at elevation 212, two air ducts serve to convey the necessary cooling air to the generators. These ducts have six openings per unit in the downstream wall of the substructure, each opening being 5 feet by 7 feet. Openings are also provided in the generator floor, with louvres to regulate the air circulation.

The main operating floor of the power house is at elevation 221, and is 47 feet wide and 496 feet long, with the units spaced at 62-foot centres. On the upstream side of the generators, adjoining the intake structure, there are three gallery floors, 20 feet wide, located respectively at elevations 223, 236 and 252. These galleries serve to accommodate all auxiliary and service equipment, low tension switchgear, control room and offices.

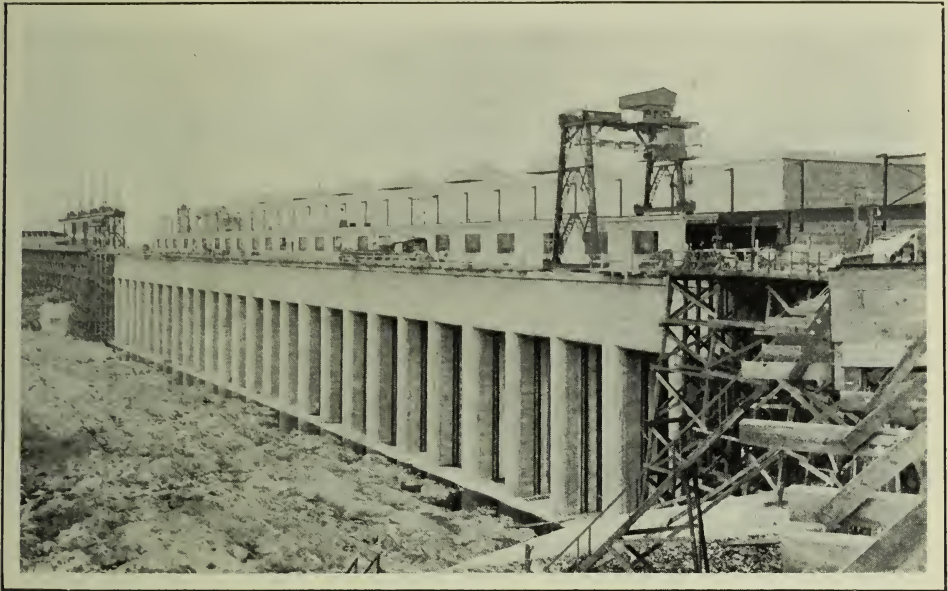
The hydraulic equipment consists of eight vertical turbines, rated at 28,000 horsepower, 125 r.p.m. under 53-foot head, with propeller-type runners. Each machine is supplied with a Morris-Pelton electrically controlled governor, which is set on the main floor upstream from, and in between, the generators. The governors are provided with individual oil pumps, accumulator tanks and sump tanks, which are located on the gallery floor at elevation 223, and the units are interconnected in pairs with ample capacity to insure against shutdowns.

#### Construction Features

In the construction of the project, two features peculiar to the site were the diversion of large volumes of water during construction, necessitating numerous and long cofferdams, and the construction of a concrete dam of great length. The diversion of the water was simplified by the large number of islands and rock ridges scattered in the river channel, by the comparatively shallow depth of water, and by the fact that in most cases no pumping was required, as the natural drainage behind the cofferdams provided disposal for the leakage. In the case of the tailrace cofferdam, where depths up to 25 feet were encountered, it was necessary to use steel-sheet piling to secure tightness in the deep section.

The concrete mixing plant, operating two 2-yard mixers, was centrally located on Mohr island, close to the power house site. The sand for aggregate was brought from a pit about forty miles away, and stored in bins. The stone for aggregate was crushed from the rock obtained in the excavation for the power house, and stored in a rock pile. The mixers delivered the concrete to heavy or light trains, made up of dump cars on standard and narrow-gauge track drawn by steam and gasoline engines, respectively. The distributing tracks were laid on a light timber trestle, which ran the full length of the dam and power house on the upstream side, and the concrete was placed from the cars by means of chutes.

At the beginning of the year the work on the diversion of the Canadian National railway was under way, some work had been completed on the earth dyke, as well as a considerable part of the bulkhead sections of the dam. About one-half of the Ragged chute sluices was finished, as well as most of the work of the Wolverine sluices and of the sluice gate section, and concreting had commenced on the power house substructure. This brief summary, however, does not indicate the extent of the work done during the previous year, including, as it did, a great amount of work on construction railway, construction camps, cofferdams, clearing and excavation.



CHATS FALLS DEVELOPMENT—OTTAWA RIVER

Power house from up-stream side showing forebay before admission of water



CHATS FALLS DEVELOPMENT—OTTAWA RIVER

Forebay and power house headworks



Work proceeded rapidly during November and December, 1930, on the Quebec section of the dam, cofferdamming, rock excavation and concreting all being in progress at the Merrill island sluices and on Conroy island. The Merrill island sluices were completed, except for the deck, in December, when concreting operations were suspended for the winter. Of the seventy-four stop-log sluices, sixty-four were completed by the end of December, and more than 7,000 feet of bulkhead and sluiceway sections combined, 100,600 cubic yards of concrete having been poured in this part of the work. Power house construction had also proceeded rapidly in these two months, 30,000 cubic yards of concrete having been poured in headworks, floors and piers, draft tubes and other parts of the substructure. Three of the sluice gates were erected in place.

Throughout the winter months, work was concentrated largely on the power house, the last piers of the power house headworks being completed in March, and turbine erection proceeded. During January, the sites of the Mississippi dams were cleared and, with the return of favourable weather in April, the building of these dams commenced. Work was recommenced at this time also on the earth dyke.

The diversion of the Canadian National railway was completed and came into service on June 23. In the same month, concreting operations were recommenced on the main dam. The month of August saw the practical completion of the main dam, earth dyke and Mississippi dams, and the improvement of the channel approach to the forebay at the end of Mohr island. The force organized to build the Mississippi dams was moved on their completion to Lavergne point, and commenced work on the construction of a channel to improve the outlet of the lake. A cofferdam was built to unwater the area to be improved, and work commenced on the excavation of all rock down to elevation 235 for a distance of about 500 feet from the shore. This work will permit the level of Chats lake to be maintained at, or below, its natural level for normal operating headwater levels at the power house, which are above the natural levels there. Tree growth and debris were removed from islands in this part of the river, where they would have a tendency to retard flow during flood periods.

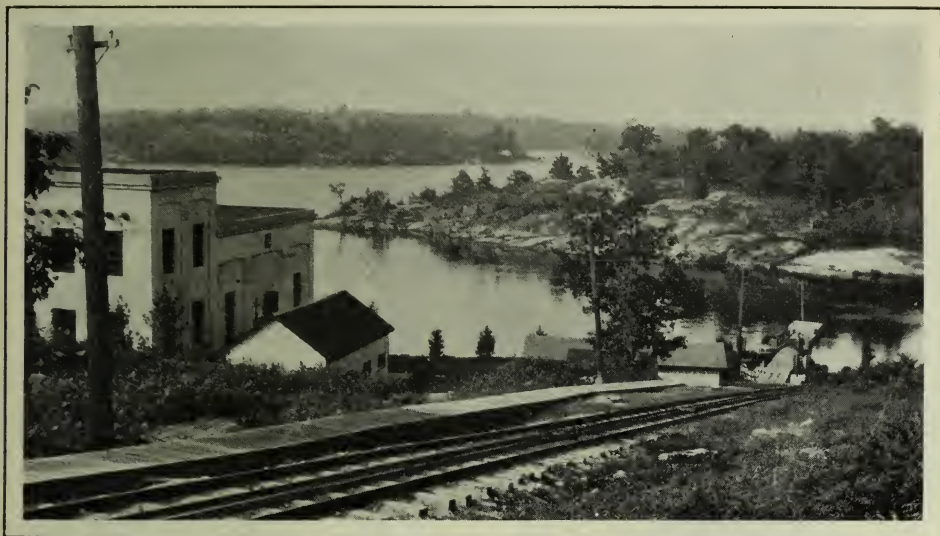
On September 15, the cofferdam above the power house was partially removed, and water rose above the sills of the power house intake. On the 17, the tailrace cofferdam was blown out. Units Nos. 2 and 3 were started on September 26 and completed their dry-out runs on October 5.

Headwater level was held below the normal operating head, to facilitate work at the outlets of Chats lake, on the Canadian National railway bridge piers, and at various places on the dam. Four units were in operation at the end of the fiscal year. Work is proceeding on Units Nos. 6 to 9, which will come into service in a year's time.

## GEORGIAN BAY SYSTEM

### **Big Chute Development**

Repairs were made to the power canal at this plant during the summer of 1931. The canal is formed partly by excavation in rock and partly by gravity side-walls on top of the rock. Leakage was occurring through seams in the rock and through construction joints in the concrete, and required that special



**BIG CHUTE POWER DEVELOPMENT—SEVERN RIVER**

View looking downstream showing power house on the left

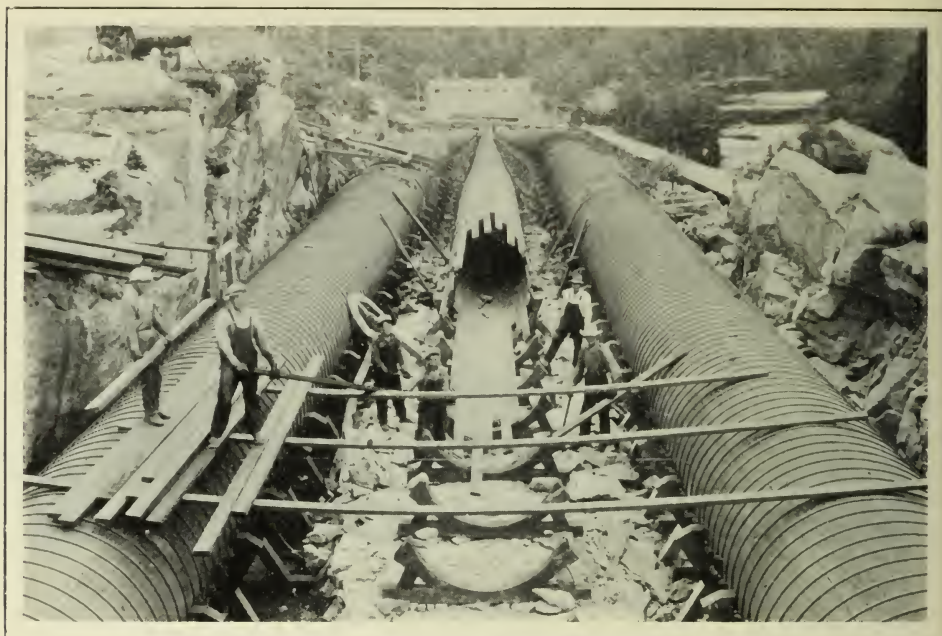
attention be given to maintenance along the penstocks and near the power house. A waterproof concrete membrane was built along parts of the walls, and the rock surfaces were treated with gunite. The plant was shut down and the canal dewatered only on five successive Sundays, as it was necessary that load be carried on the remaining six days of the week.



**BIG CHUTE POWER DEVELOPMENT—SEVERN RIVER**

Canal improvements. The new work is plainly visible along both walls. Note the rough rock along each side of the canal below the walls





SOUTH FALLS DEVELOPMENT—SOUTH RIVER, NIPISSING DISTRICT  
Reconstruction of wood-stave penstock No. 2

### South Falls Development

It became necessary to replace wood-stave penstock No. 2 at this plant. The penstock was built in 1917 in connection with the addition of a 1,000 horsepower unit at that time, and is 960 feet long and 5 feet in diameter. The reconstruction involved careful rock excavation and difficult handling of material, as penstocks 1 and 3 on either side had to be kept in service during the replacement of No. 2. At the same time, attention was given to the foundations of saddles on the other penstocks.

A waterproof membrane of concrete was applied to the face of the dam at Hollow lake. This lake, on an upper tributary of the South Muskoka river, serves as a storage reservoir for the South Falls plant.

## THUNDER BAY SYSTEM

### Alexander Power Development

Reference was made in the last annual report to the commencement of operation at the Alexander development, which carried commercial load for the first time on October 21, 1930. In order to complete various details of the plant, there remained a considerable amount of work to be done, viz., painting, grading of grounds and restoration of the areas occupied by construction buildings.

Hydraulic tests were made on the turbine equipment in March. The turbines, made by the S. Morgan Smith-Inglis Company, Toronto, were found to exceed the manufacturer's guarantees at all points, their maximum output at rated head being 18,300 horsepower, or 300 horsepower more than guaranteed, and their maximum efficiency 92.8 per cent.





ALEXANDER POWER DEVELOPMENT—NIPIGON RIVER

Main dam and spillwall

A brief outline of the scheme of development was included in the twenty-second annual report (1929). A description, in greater detail, of the completed development is appended.

The development is situated on the Nipigon river, about one and one-half miles downstream from the Cameron falls development. Operation of the latter plant commenced in 1919, with two units, of 12,500 horsepower capacity each, in service, and the plant was completed by 1926, four similar units being added during the intervening seven years. Between that time and 1930, when the Alexander development came into service, the Cameron Falls development was at times severely taxed to supply the power demands of the system, the maximum output sometimes exceeding the rated capacity of the development. The completion of the Alexander development was thus very desirable.

At the site of the development, the course of the river followed two sharp bends, thus forming two narrow peninsulas, across one of which a short power canal was excavated, which served, during the period of construction of the main dam, to carry the whole flow of the Nipigon river, and now conducts water to the forebay of the plant. Over the whole of the surface of the peninsula there was only a light overburden of earth, and the quality of the underlying rock was such as to provide unexcelled foundations for power house and spillway. The power house is on the downstream side of the peninsula, and to the right of it looking downstream is a concrete bulkhead section of the dam, and then a low earth-fill dam, with clay core and cut-off trench, extending about 1,500 feet to the point where the natural surface of the ground is at elevation 678, or 5 feet above maximum headwater level.

On the left of the power house, looking downstream, are, in order, a fishway, a log chute and a spillway, the last named being 525 feet long. No sluiceways

are provided, the spillway capacity being sufficiently great to care for the maximum river flow. Beyond the spillway is the main dam, extending across the original river channel to high ground on the east bank. Borings in the river revealed a lack of rock foundation for the dam at reasonable elevation, and a semi-hydraulic fill structure was therefore built. The material for this was obtained close by on the east bank of the river, was taken to the sides of the dam in dump trains, and sluiced thence by monitors into the central pool of the dam to form the impervious core. The rock excavated from canal and power house site was used to form the toe fill of the dam, and the amount was such that an unusually heavy toe was built. The main dam contains in all about 800,000 cubic yards of fill.

At the junction of the concrete and earth sections of both auxiliary and main dams, specially designed abutments were built. They are confined to the core area and have a batter of 5:12 on the face adjacent to the core, to compensate for vertical shrinkage of the core material and for the tendency of the core to shrink away from a vertical face. A year's service indicates that satisfactory results are obtained at the junctions and throughout the earth fills, no leakage being observable.

A material saving was effected in the cost of the development by the omission of the headworks superstructure, heretofore generally provided to house the travelling crane for handling stop-logs, gates and racks. A low passageway, along the rear of the headworks deck, houses the headgate hoists. For the usual travelling crane, a locomotive crane is substituted, housed elsewhere, and made available for various other services. All openings in the headworks deck have removable matched plank covers, made in sections for quick handling, and, through openings behind the headgate guide checks, warm air is admitted from the generator room to the area below the deck. Complete freedom from ice troubles was experienced throughout the first winter of operation.

On the upstream side of the headworks is a curtain wall extending to below minimum headwater level, and immediately behind this wall are the racks protecting openings 34 feet high and 18 feet wide, two for each unit. Checks for emergency gates are constructed immediately behind the racks. The service gates, 19 feet by 19 feet 5 inches, are motor operated, are equipped with fixed rollers, and are at the entrance to the short concrete supply pipes leading to the concrete scroll case. Two supply pipes serve each unit. Three units are installed and operating, and headworks are built for a fourth. The turbines are vertical, Francis type, single runner units with elbow type draft tubes, each rated at 18,000 horsepower at 100 r.p.m. and 60-foot head. Reference is made elsewhere to the fact that they exceed the maker's guarantees. They are controlled by Woodward oil-pressure governors, with motor-driven flyballs, an automatic speed matcher for synchronizing, and equipment to permit remote control of the unit.

#### **Cameron Falls Development**

A new steel bridge, on concrete piers, was built across the Nipigon river, to carry the railway spur into the power house. This replaces the temporary structure erected at the time that construction of the plant began.



ALEXANDER POWER DEVELOPMENT—NIPIGON RIVER

General view of development from downstream side. Cameron Falls power house can just be distinguished in the distance

## HYDRAULIC INVESTIGATIONS

Detail plans of alternative sites of Bala No. 3 development were prepared, and preliminary layouts and estimates of cost commenced. There are two developments at the outlet of lake Muskoka, which were purchased in 1929. The new development will have a capacity of about 5,000 horsepower under a 19-foot head.

The site of a storage dam at the outlet of Ivanhoe lake, near Foleyet, was examined for the Department of Northern Development and certain recommendations made regarding construction procedure.

Field investigations were made and plans and estimates prepared looking to the raising of Kaminisneg lake on the Madawaska river two and one-half feet for storage purposes. Local interests co-operated with the Commission in this work.

Investigations were made of two possible power concentrations of 12 and 14 feet at dams 4 and 5 on the Otonabee river, adjacent to locks 23 and 22, respectively, on the Trent canal system. Field inspections were made at the sites and preliminary layouts and estimates commenced for single-stage and two-stage developments.

Arrangements were made with the Dominion Government whereby the Dominion Water Power and Reclamation service continues certain stream measurements that, under their policy of reduction of this work, would otherwise be discontinued. The Commission is vitally interested in the results of this work, and is to pay a share of the cost of certain parts of it.

Studies continued on certain features of the development of the St. Lawrence river powers, and a number of conferences in connection therewith were held with officials of the Dominion Government and of the state of New York.



## SECTION V

### ELECTRICAL ENGINEERING AND CONSTRUCTION

#### (STATION SECTION)

#### NIAGARA SYSTEM

#### Generating and Switching Stations

**Generating Stations on the Niagara River**—Nineteen 110,000-volt potential transformers were purchased with other necessary equipment for the installation of high-speed relaying of the high-voltage lines at Queenston generating station. This equipment was placed in service in December, 1930 and has operated successfully to localize troubles and reduce the shocks to the system at time of trouble. Studies on the installation of similar relay equipment at other points on the system are being made. Improvements were made to the interior lighting at Queenston generating station.

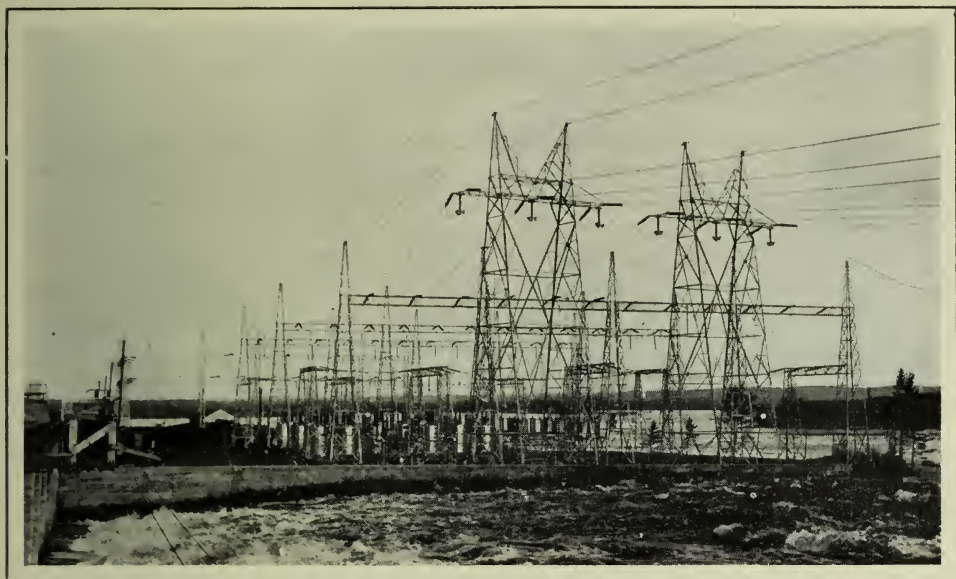
**Chats Falls Development**—Engineering work on the electrical installation and superstructure of the generating station of the Chats Falls development has been carried on for the Chats Falls Executive Board. This station is situated on the Ottawa river near Fitzroy and consists of a concrete and steel building to house eight 23,500-kv-a., 13,200-volt, 25-cycle, 125-r.p.m. vertical-shaft generators and the switching and control equipment.

The building for eight generators has been erected. Four generators together with their control and switching equipment have been installed this year, and the first two units were ready for test run on October 25, 1931. The second two units will be similarly ready during November, and the remaining four will be installed during 1932. Provision has been made for extending the building to accommodate two additional units.

The 13,200-volt switching equipment and busses are of metal-clad construction. Single-conductor, paper-insulated, lead-covered cables are used for the connections from generators to the metal-clad busses and to the transformers.

A pair of generators and one transformer bank will be operated as a group and no provision is made to parallel these groups on the 13,200-volt side.

The station-service power is obtained from two banks of three 500-kv-a., 3,200/575-volt transformers connected to the 13,200-volt busses.



CHATS FALLS POWER DEVELOPMENT—OTTAWA RIVER

Switching structure—220,000 volts



CHATS FALLS POWER DEVELOPMENT—OTTAWA RIVER

Exterior of power house from down-stream side

(For interior view see Frontispiece)

**Beauharnois and MacLaren Developments**—Further engineering conferences were held, in co-operation with the engineers of the Beauharnois Light, Heat and Power Company, and of the MacLaren Corporation, relative to the design of their respective generating stations in accordance with provisions in the power contracts.

**Victoria Island Inter-switching Station**—An inter-switching station is being installed on Victoria island approximately one-half mile from Chats Falls for the purpose of connecting a 220,000-volt circuit from Chats Falls transformer station to one of the Paugan-Leaside circuits. Hand-operated disconnecting switches are being employed and three oil-insulated current-transformers for 220,000-volt service will be installed to provide automatic relay protection for the circuits. The installation is complete except for the current-transformers.

**Hastings Switching Station**—A switching station was erected and placed in service near Bannockburn for sectionalizing the three 220,000-volt lines from Toronto-Leaside transformer station to Paugan and Chats Falls transformer station. The installation includes seven 220,000-volt disconnecting switches mounted on steel structures and electrically controlled. A patrolman's house is located at the site.

### Transformer and Distributing Stations

**Chats Falls Transformer Station**—This station receives the power from Chats Falls development at generated voltage and transforms it to 220,000 volts for transmission to Toronto. The present installation will consist of four banks of transformers and two outgoing lines, with provision for an additional bank and outgoing line. The complete structures and busses for four banks have been erected and two banks with their switching and control equipment have been installed this year, the third and fourth banks will be installed in 1932. The initial installation was tested out on October 25, 1931.

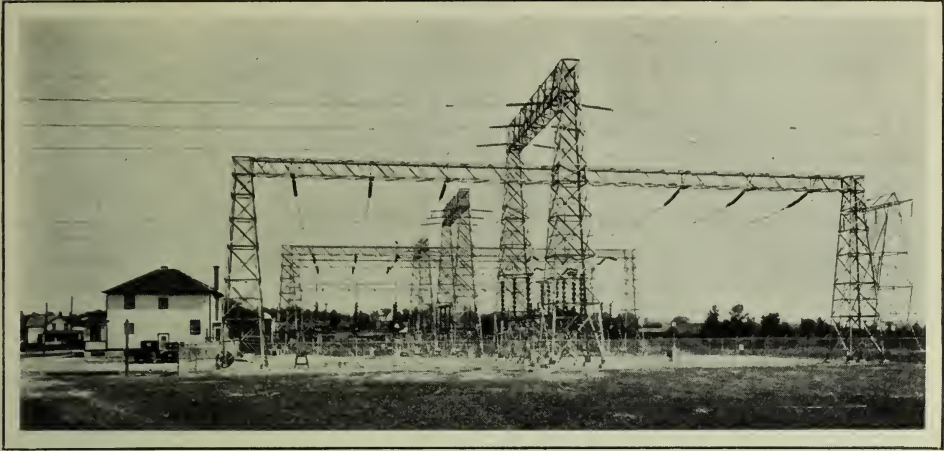
**Niagara District**—High-speed relaying was installed on two high-voltage lines at Niagara transformer station as was done at Queenston generating station. Six 135,000-volt oil circuit-breakers of high-rupturing capacity were installed in the high-voltage lines and two old breakers removed. A 110,000-volt outdoor bus was erected, and all the equipment placed in service during the year at Niagara transformer station. The cooling-water system for the transformers was also improved.

Improved 12,000-volt metering equipment was installed in the Ontario Paper Company's plant at Thorold, in the Niagara Falls Waterworks filtration plant at Chippawa, and in the Page Hersey Company's plant at Welland.

**Hamilton and Dundas District**—The Hamilton-Stirton transformer station and the new 110,000-volt line feeding it from Hamilton transformer station referred to in last year's Report were placed in service in December, 1930. At Dundas transformer station ten 110,000-volt oil circuit-breakers were fitted with the new type of contacts for improved performance, and equipment was installed for high-speed relaying on six 110,000-volt lines.

Metering equipment was installed in the Canadian Gypsum Company's plant near Hagersville.

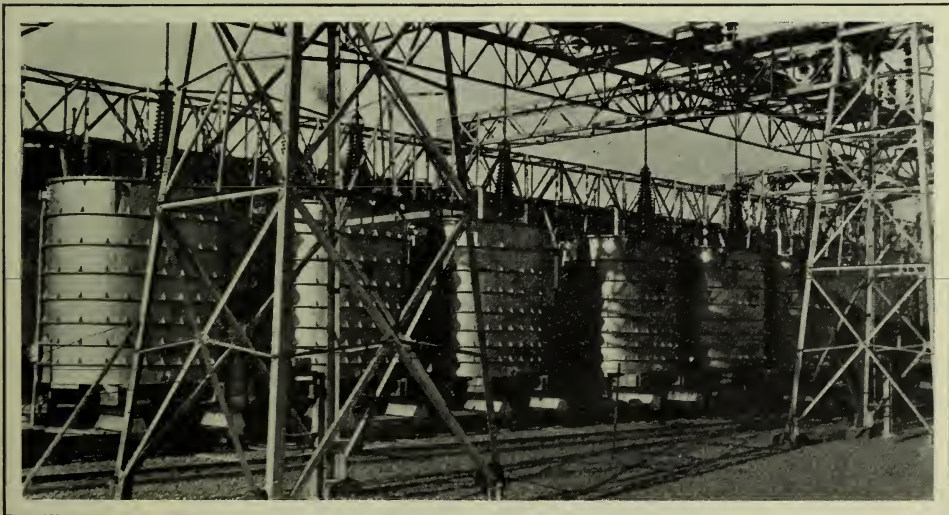




HYDRO 220,000-VOLT TRANSMISSION LINES  
Hastings switching station

Metering equipment was installed at Bartonville inter-switching station, at the steam plant, at Victoria station and at Beach station at Hamilton, to measure the power supplied from the Dominion Power system to the city of Hamilton.

**Toronto and York District**—At Toronto-Leaside transformer station the work in progress referred to in last year's Report has been completed and the equipment placed in service. The capacity of the station was further increased this year by the purchase and installation of two additional 45,000-kv-a.



CHATS FALLS POWER DEVELOPMENT—OTTAWA RIVER  
Transformer banks—capacity 47,100 kv-a.

transformer banks Nos. 5 and 6, three 220,000-volt and two 110,000-volt oil circuit-breakers and the necessary steel structures supporting the busses.

At Toronto-Bridgman-Davenport transformer station the installation of a bank of three 10,000-kv-a. transformers with spare unit, mentioned in last year's Report, was completed. A second bank has also been installed using the remaining three 10,000-kv-a. units which were purchased at the same time. When the latter bank was installed, three 5,000-kv-a. transformers were released for use at other stations on the system.

At New Toronto distributing station the 3,000-kv-a. transformer mentioned in last year's Report was placed in service in December, 1930. Another transformer of the same capacity was purchased and will be installed next year replacing an existing 1,500-kv-a. unit.

A new outdoor station, known as North Yonge auto-transformer station, was erected on the same site as the new Willowdale distributing station, about two and a half miles north of Toronto's city limits, to transform the voltage on the north Yonge street lines from 13,200 to 26,400 volts and give improved service to the district north of Toronto. Two 5,000-kv-a. three-phase, auto-transformers equipped with special regulating taps were purchased and, with the necessary switching equipment, were installed and placed in service in June.

Willowdale distributing station was erected to supply the district surrounding Willowdale and relieve some of the load on York Mills distributing station. A 1,500-kv-a. three-phase transformer was transferred from system reserve and installed outdoors together with the 13,200-volt switching equipment. The 4,000-volt equipment was installed in the space provided by North Yonge Radials in their adjacent building. The Keswick, Mount Joy, Sharon and Aurora distributing stations, which were operating at 13,200 volts, were changed to 26,400-volt operation, as these now receive power through North Yonge auto-transformer station.

The old Newmarket distributing station was dismantled and a new station erected using three 500-kv-a. single-phase transformers. The transformers in the old station were transferred to system reserve. Richmond Hill distributing station, Sutton distributing station and Pottageville distributing station were erected during the year. The first is a semi-outdoor installation with three new 500-kv-a., single-phase transformers, while the latter two are pole-type construction using respectively three new 250-kv-a. units and three 75-kv-a. units obtained from system reserve.

At Scarborough Township distributing station an additional 4,000-volt feeder was installed. Bond Lake distributing station was dismantled and the seven 300-kv-a. transformers transferred to system reserve. The district previously supplied from this station is now supplied from the new distributing stations at Richmond Hill and Pottageville.

Graphic meters were installed in the Toronto Hydro-Electric System's Glen Grove sub-station on the 13,200-volt feeder supplying North Yonge auto-transformer station.

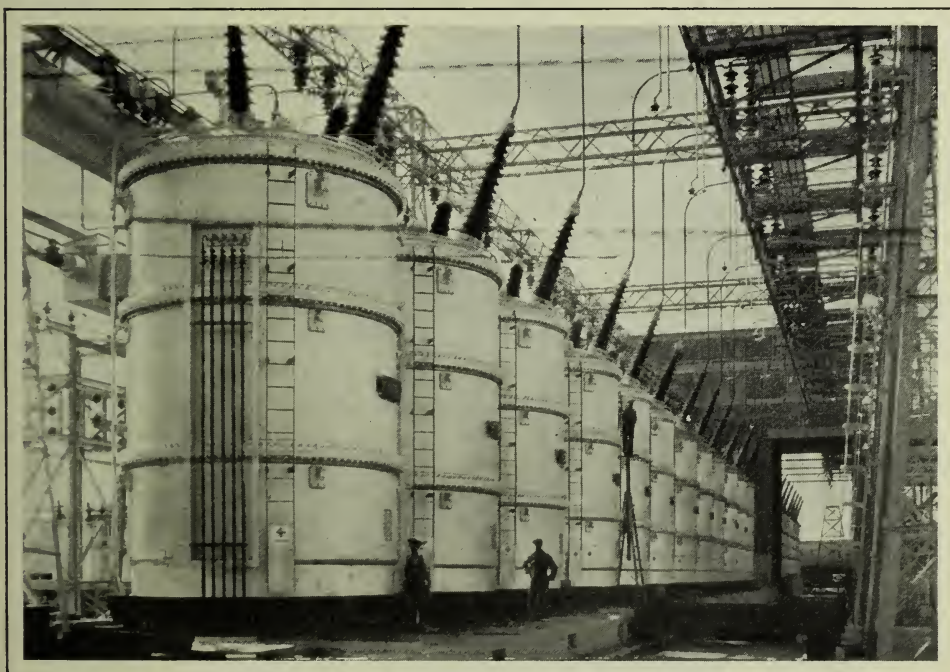
**London District**—At London transformer station a new control room is being erected as an extension to the building. A cooling pond is being built and additional water pumps installed with the necessary piping. Provision is being made for additional feeders and the relaying of the Municipal feeders is being improved. This work should be completed early next year.





TORONTO—LEASIDE TRANSFORMER STATION

Control room



TORONTO—LEASIDE TRANSFORMER STATION

Six 45,000-kv-a. transformer banks



**Guelph District**—At Guelph transformer station the installation of the second bank of three 2,500-kv-a. transformers and the other work mentioned in last year's Report was completed.

Guelph rural distributing station, using three 150-kv-a. single-phase transformers released from Fergus distributing station, was erected on Guelph transformer station site and placed in service in June. The capacity of Fergus distributing station was increased when the three original 150-kv-a. transformers were replaced by three new 500-kv-a. units and a new oil circuit-breaker with other necessary switching equipment installed.

**Kitchener District**—In Elmira distributing station a rural feeder was installed. Waterloo rural distributing station was erected north of Waterloo to feed the surrounding district. Three 150-kv-a. single-phase transformers were purchased for this installation.

**Stratford District**—Tavistock distributing station low-voltage bus was changed from 575 to 4,000-volts.

**Brant District**—The capacity of both Drumbo and Burford distributing stations was increased by the installation of three 150-kv-a. single-phase transformers in each station replacing 75-kv-a. units which were transferred to system reserve. Three transformers released from Preston rural distributing station were rebuilt and used at Burford, while the transformers used at Drumbo were previously released from Walkerville rural distributing station.

**Essex District**—At Essex transformer station the installation of the fourth bank of three 5,000-kv-a. transformers mentioned in last year's Report was completed and the bank was placed in service in November, 1930.

At Kingsville a new semi-outdoor distributing station was built with provision for two banks of transformers. One bank of three new 500-kv-a. units and its 26,400-volt switching equipment were installed outdoors, and the 4,000-volt equipment was placed in a brick building. The old station was dismantled and some of the equipment used in the new station. The six 75-kv-a. transformers which were released were transferred to system reserve.

The capacity of Essex distributing station was increased by the installation of a bank of three 300-kv-a. transformers replacing three 150-kv-a. units. Comet distributing station was installed and placed in service, using three 150-kv-a. transformers released from Essex distributing station.

In Riverside distributing station a 75-kv-a., 4,000-volt regulator was installed on the Tecumseh and St. Clair-Beach feeder.

At Riverside, Sandwich and East River distributing stations emergency busses were installed.

Engineering assistance was given to Windsor Hydro-Electric System in the purchase of an additional 3,000-kv-a. transformer, two 100-kv-a. induction-regulators and electrical equipment for its municipal station No. 3.

**St. Clair District**—Sarnia Beach rural distributing station was erected using one outdoor bank of three new 150-kv-a. transformers.

A 1,500-kv-a. three-phase transformer and the necessary switching and feeder equipment were purchased and installed for the Sarnia Hydro-Electric System in its municipal station No. 2.



SUTTON DISTRIBUTING STATION

### GEORGIAN BAY SYSTEM

**Severn District**—Midhurst distributing-station capacity was increased with the installation of three new 100-kv-a. single-phase transformers replacing the 75-kv-a. three-phase unit which was transferred to system reserve. At Fergusonville distributing station a second 50-kv-a. single-phase transformer obtained from system reserve was installed. Painswick distributing station, with a bank of three new 100-kv-a. transformers, was erected south of Barrie to supply power to that district. At Innisfil distributing station a new bank of three 150-kv-a. transformers was installed and the original two 50-kv-a. units were transferred to system reserve.

At Beeton distributing station improvements were made to the structures, equipment and site. At Stayner distributing station a bank of three new 250-kv-a. transformers arranged for 8,000-volt distribution was installed, replacing three 100-kv-a. units which were operating on 4,000-volt distribution. The feeder supplying Creemore was changed from 4,000 to 8,000 volts and the bank of three 75-kv-a. transformers which previously stepped the voltage up to 8,000 on the Wasaga-Beach feeder is now operating to step the voltage down to 4,000 volts on the feeder supplying Stayner distribution system. At Barrie distributing station a spare 1,000-kv-a. transformer was purchased and installed.

**Eugenia District**—Warton, Port Elgin, Paisley and Hepworth outdoor distributing stations were erected during the year. Three new 150-kv-a. transformers were installed at Warton and three 100-kv-a. units at Port Elgin. The three 50-kv-a. transformers released from Beaumaris distributing station were used at Paisley and two of the same capacity were transferred from system reserve for installation at Hepworth. A station was also erected on the Southamp-

ton generating station site to tie in the latter with the Eugenia district. A bank of three 150-kv-a. transformers was purchased for this installation. Improvements were made to the equipment and site at Elmwood and Kilsyth distributing stations.

**Wasdells District**—At Beaverton distributing station three 100-kv-a. single-phase transformers removed from Stayner distributing station were installed indoors to operate in parallel with the existing bank. At Wasdells generating station an oil circuit-breaker was installed in the 2,300-volt Sparrow Lake feeder.

**Muskoka District**—At Beaumaris distributing station a bank of three new 150-kv-a. transformers was installed, replacing three 50-kv-a. units which were transferred to Paisley. At Wasdells auto-transformer station a three-phase, 38,000-volt surge absorber was installed in the line.

**Bala District**—At Bala generating station more suitable meters were installed and changes were made in the switching arrangement and telephone equipment.

### EASTERN ONTARIO SYSTEM

**110,000-volt Transformer Stations**—Three of the 5,000-kv-a. transformers and their under-load tap-changing equipment in service at Smiths Falls transformer station were removed to Kingston where they were installed in the Frontenac transformer station to increase the power supply to the Central Ontario System.

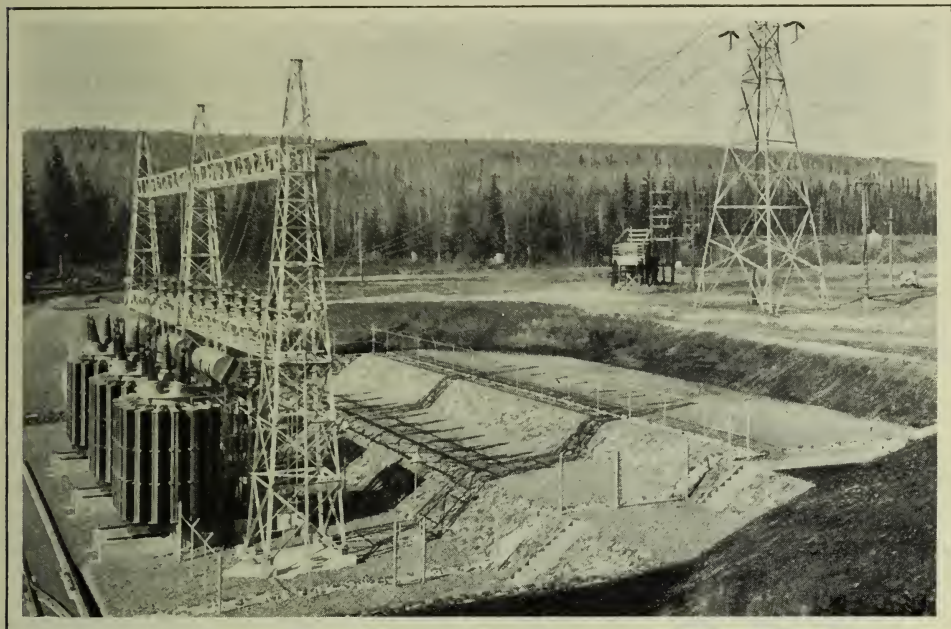
The fourth 5,000-kv-a. transformer was left at Smiths Falls where it was banked with four 1,250-kv-a. units, transferred from Cornwall, using two in parallel in each of the other two phases.

**Central Ontario District**—At Colborne distributing station a third 100-kv-a. transformer was installed and connected in with the two existing units to form a three-phase, 300-kv-a. bank. Near Napanee a 300-kv-a. station was erected to supply power to the surrounding rural district. Three 100-kv-a. transformers were purchased for this installation. At Warkworth distributing station a 100-kv-a. transformer was transferred from system reserve and installed, replacing the 50-kv-a. unit.

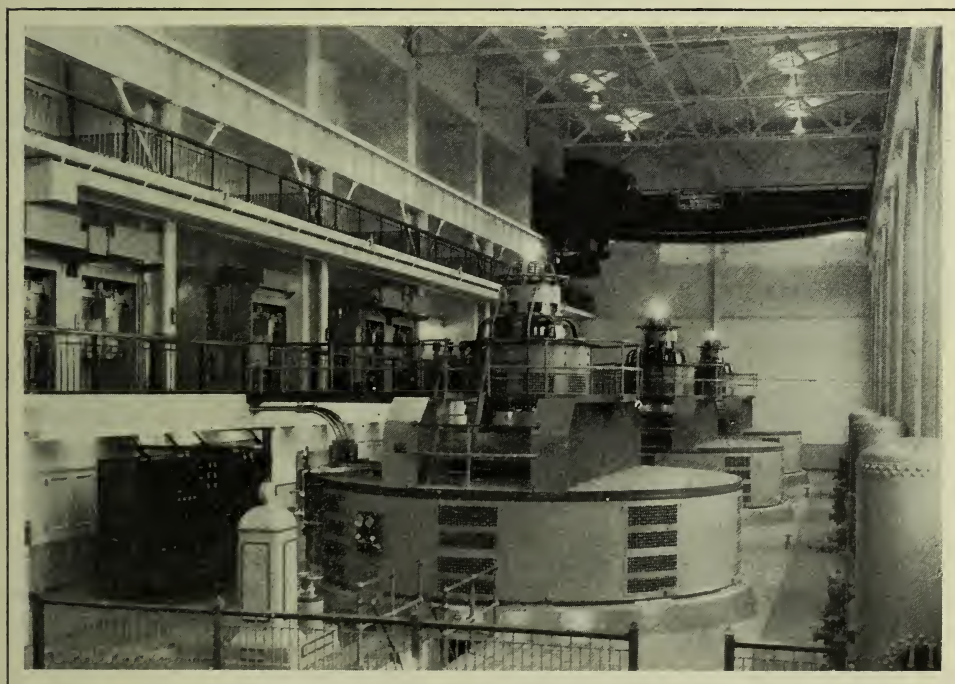
At Norwood distributing station a third 4,000-volt feeder was installed to feed the village of Hastings. At Stirling municipal station a 2,400-volt feeder was installed to feed the rural district. At Belleville distributing station the low-voltage switching equipment was replaced by new metal-clad switchgear with higher rupturing capacity oil circuit-breakers. At the Kingston Elevator Company's station metering equipment was installed. The metering equipment for the Ontario Rock Company's load was transferred to its station from Heely Falls generating station.

**St. Lawrence District**—The metering equipment for the Eugene Phillips load was changed from the low to high-voltage bus.





ALEXANDER POWER DEVELOPMENT—NIPIGON RIVER  
Transformers and grounds



ALEXANDER POWER DEVELOPMENT—NIPIGON RIVER  
Interior of generating station showing three units completed, total capacity 54,000 horsepower

**Rideau District**—At Rideau transformer station the 1,500-kv-a. transformer was reconnected so that it now receives power from the 44,000-volt side of the power bank in Smiths Falls transformer station and steps down to 2,400-volts. In this station also, a 750-kv-a., three-phase unit, transferred from system reserve, was installed to supply 25,400-volt power to the Rideau district from the 2,400-volt bus.

The Forfar distributing station was changed over to receive power at 110,000-volts and two 500-kv-a. single-phase transformers were purchased and placed in service in open delta. The 100-kv-a. unit was removed and placed in system reserve.

### THUNDER BAY SYSTEM

**Generating Stations on the Nipigon River**—The installation of the second and third generators and the three transformer banks at Alexander Power development referred to in last year's Report was completed and the equipment placed in service early in the year. The station is now finished except for the installation of the remote control equipment. This is being supplied at the present time and will be in service early next year.

**Transformer and Distributing Stations**—Improved relay protection was installed on 22,000-volt feeders and 110,000-volt lines and the neutral of the transformer banks was grounded at Port Arthur transformer station.

### NORTHERN ONTARIO SYSTEM

**Sudbury District**—The necessary metering equipment to measure the 25-cycle power supply to the International Nickel Company at Copper Cliff was installed and placed in service.

**Abitibi Canyon Generating Station**—Further engineering conferences were held in order to co-operate with the Ontario Power Service Corporation in the design of its generating station at Abitibi Canyon in accordance with the provisions of the power contract.

## SECTION VI

### TRANSMISSION, DISTRIBUTION AND RURAL SYSTEMS

#### TRANSMISSION SYSTEMS

The past year has been one of moderate activity in the Commission's transmission section. New lines have been constructed, most notably, 192 miles of 132,000-volt, steel-tower line between Hunta and Sudbury. This is the first major Hydro construction in the Sudbury district and was completed in twelve months' time. An additional 220,000-volt line was also completed between the new Chats Falls generating station and Leaside, 200.6 miles.

Transmission lines of lower voltages have been erected and others have been rebuilt, either on account of their age or an increase in voltage.

Progress has been continued throughout the year in an effort to improve the telephone service in all systems, in order to make it more adequate for the Commission's needs. In all new work, particular care has been taken to co-ordinate, as closely as possible, the telephone circuits with the power circuits carried on the same poles.

In addition to the following synopsis, a map, showing all transmission lines of the Commission, is included at the back of this report and relative data are tabulated in Appendix II.

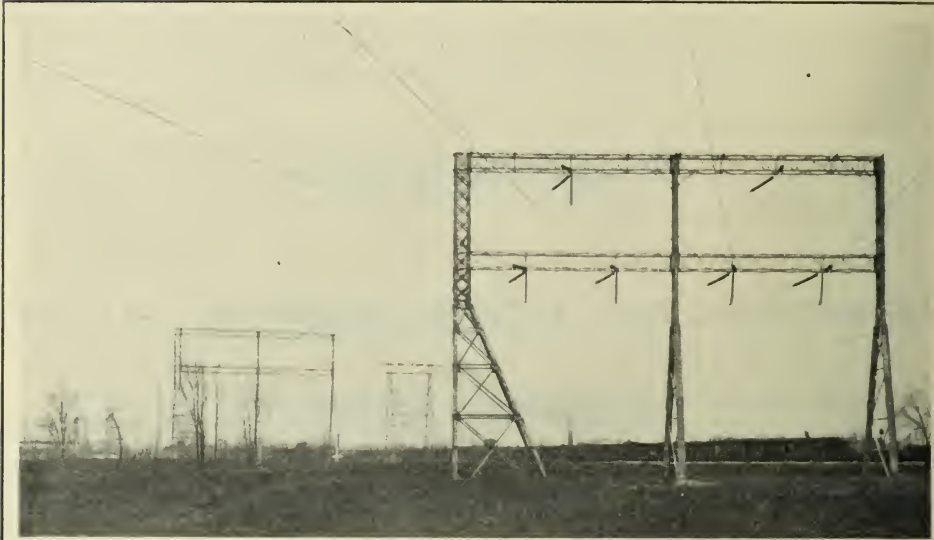
#### NIAGARA SYSTEM

##### 220,000-volt Lines

Between the new Chats Falls generating station and Leaside transformer station, a total distance of 200.6 miles, construction of a single-circuit 220,000-volt line was completed and placed in service. This line is of similar construction to the Leaside-Gatineau lines and is spaced, on an average, 150 feet from them. A tie line was also constructed between Chats Falls switching structure and the Leaside-Gatineau line, having specially designed semi-anchor, steel towers with two elevated conducting ground wires of 176,900 circular-mil, steel-reinforced, aluminum cable.

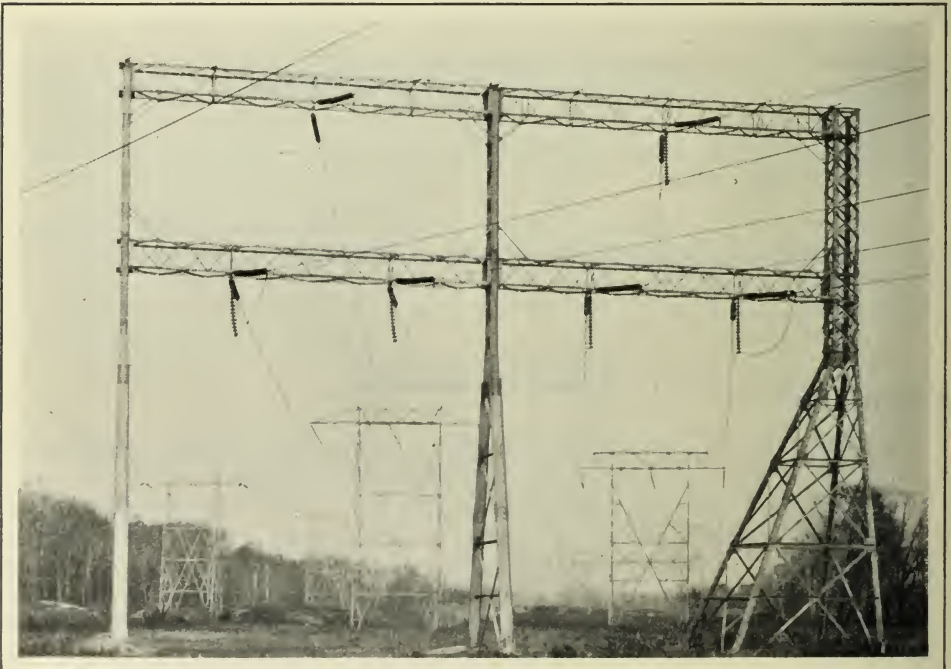
A patrol point was established at Cloyne on the 220,000-volt lines by the completion of a patrolman's cottage, a two-car garage and storeroom. Garage and storeroom were also built at patrol points, Calagobie Road and Ompah.





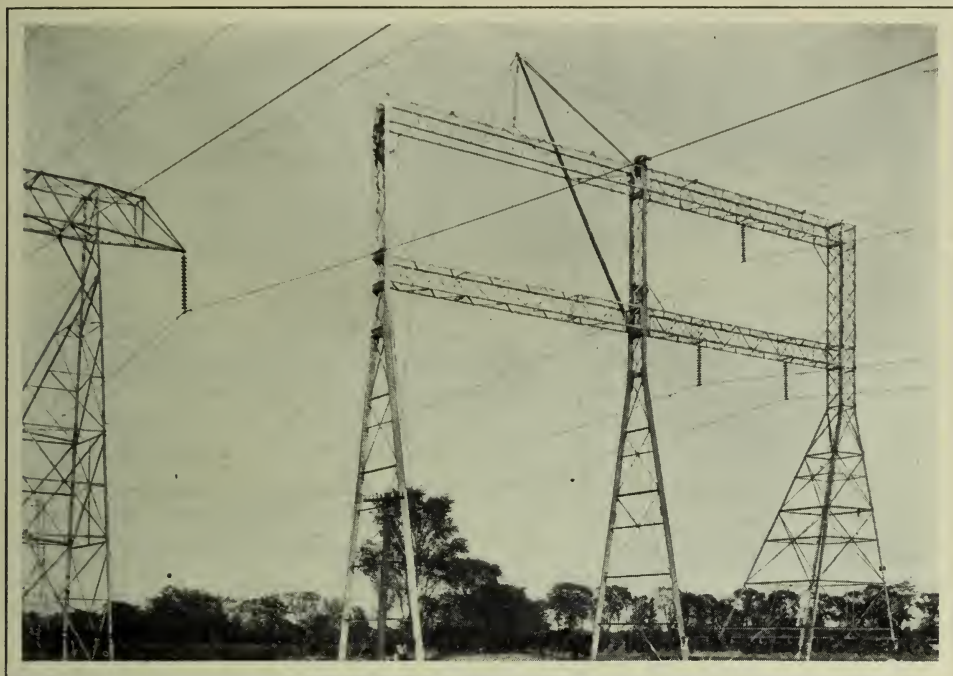
HYDRO 220,000-VOLT TRANSMISSION LINES

Looking west through bridge structure No. 977 in vicinity of Leaside transformer station



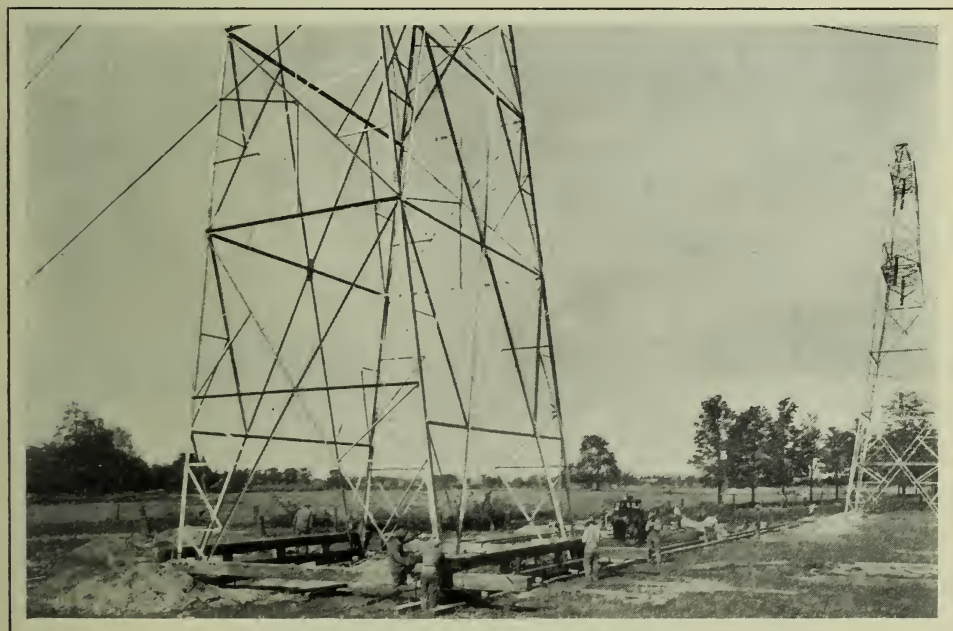
HYDRO 220,000-VOLT TRANSMISSION LINES

Looking east through bridge structure No. 977 in vicinity of Leaside transformer station



HYDRO 220-000-VOLT TRANSMISSION LINES

Erecting bridge structure at entrance to Leaside transformer station



HYDRO 220,000-VOLT TRANSMISSION LINES

Moving tower No. 951 showing rigging and runway

**110,000-volt Lines**

In Toronto, four, four-circuit steel towers were erected to replace twelve double-circuit towers on account of the construction of St. Clair avenue subway.

Between Islington junction and Bridgman transformer station, seven miles of deteriorated ground cable were replaced by 5/16" high-tensile, steel cable.

In Burlington Bay, as a protection against ice, five thousand yards of rock fill were placed around piers of steel towers.

In Woodstock station yard, circuits were diverted to accommodate new station construction.

**26,400-volt Lines**

Between Essex distributing station and Leamington junction, 14.40 miles of wood-pole line were rebuilt. New guys were installed and the existing power cables were replaced by 3/0 steel-reinforced aluminum conductor.

At Gosfield, two air-break switches were installed, and at Leamington one old switch was replaced by a more modern type and an additional switch installed.

Between Essex transformer station and Walkerville municipal substation, it was found necessary to increase the insulation from two to three units.

Between a new junction on the Amherstburg-Harrow line and the new Comet distributing station, a single circuit of No. 4 steel-reinforced aluminum cable was erected on rural poles. An air-break switch was erected at the junction point.

The Harrow-Kingsville line was rebuilt to provide clearances and properly arrange rural and municipal circuits carried on this 26,400-volt pole-line.

At Kingsville, due to the construction of a new distributing station, the transmission lines in the town were rearranged and relocated.

Connections were made to the new Sarnia rural power district substation and to improve the operating conditions, an air-break switch was installed at the junction on the tapped line.

**Other Lines**

In Chippawa, a short section of 13,200-volt wood-pole line was rebuilt to accommodate an extra 190,000 circular-mil copper circuit to a customer, and a new double-circuit line was constructed from the customer to supply the filtration plant at Chippawa.

Between Dundas transformer station and a customer near Waterdown, 7.37 miles of double-circuit 13,200-volt line have been rebuilt and the No. 2 aluminum conductor replaced by No. 1/0 steel-reinforced aluminum cable. Similar work was done between Dundas transformer station and Dundas municipal station, 1.5 miles, and between Waterdown junction and Waterdown distributing station, 1.5 miles.

New air-break switches, replacing the old type, were installed at Waterdown junction and Caledonia terminal station.

In the vicinity of Yonge street, reinsurance of former 12,000-volt lines for 26,400 volts was completed for municipalities north of Willowdale. New, single-circuit, 26,400-volt lines were erected between Keswick junction and Sutton—8.5 miles, St. Andrews junction and Pottageville—8.25 miles. A short section of additional 13,200-volt circuit was added to the line north from York Mills. In all, 44.5 miles of 13,200-volt line were reinsulated for 26,400 volts, and 16.75 miles of new line erected.





HYDRO 220,000-VOLT TRANSMISSION LINES  
Looking west from a point west of Bannockburn



HYDRO 220,000-VOLT TRANSMISSION LINES  
Looking east from Hastings switching station

Between Dorchester junction and Broughdale junction, 33 poles were replaced by longer poles, in order to provide space for additional circuits.

Between Elginfield and Ailsa Craig, approximately 2.5 miles of line were rebuilt to accommodate Ailsa Craig rural power district attachments.

Between St. Thomas and Aylmer, some pole heights were increased in order to increase clearances to secondary circuits.

At Weston junction two air-break switches were installed to replace an old type.

Between Welland transformer station and a customer's new transformer station, construction was completed of a short section of 12,000-volt line and revisions were made to a bus-tie switch structure.

In Woodstock station yard, rearrangement of 13,200-volt lines was made to conform to the revision and extension of the transformer station.

At Lakeview junction, two old-type air-break switches were replaced by new.

Between Guelph and Georgetown 31.58 miles of 13,200-volt line were renewed by the replacement of defective insulators, cross-arms and cable-clamps. Guys were added where necessary and a short portion of line diverted at Acton.

## GEORGIAN BAY SYSTEM

### **Eugenia District**

Air-break switches were installed at Kilworthy junction on the 38,000-volt line between South Falls and Waubashene.

Between Derby Mills junction and Hepworth, Hepworth distributing station and Wiarton distributing station, a single-circuit, 22,000-volt, wood-pole line with No. 2 steel-reinforced aluminum cable was completed. This line is equipped with a single-circuit telephone and an air-break switch at Hepworth and Derby Mills junctions, total distance, 18 miles.

Between a new junction on the Tara-Southampton 22,000-volt line and Port Elgin, a new, 22,000-volt circuit was installed by building 1.5 miles of new construction and the reinsulation for 22,000 volts of 2 miles of 11,000-volt line.

Between Chesley and Paisley—10.7 miles—a 4,000-volt line was rebuilt and reinsulated to supply power to Paisley at 22,000 volts.

## EASTERN ONTARIO SYSTEM

### **Central Ontario District**

Railway crossings throughout this district have been reinforced by the addition of guys, the elimination of joints in crossings and adjacent spans.

Between Belleville switching station and Belleville distributing station, No. 1, construction was completed of a single-circuit 44,000-volt line of No. 2 steel-reinforced aluminum cable on pin-type insulators. The erection of four 44,000-volt, air-break switches was included in this construction.

At Kingston, two 44,000-volt, air-break switches were erected on the Commission's line at a point where a line owned by the municipality extends to the Canada Steamship Company elevator.



HYDRO 220,000-VOLT TRANSMISSION LINES  
Three lines looking west from Pakenham Mountain



HYDRO 220,000-VOLT TRANSMISSION LINES  
Three lines looking east from Pakenham Mountain



### THUNDER BAY SYSTEM

In Fort William, a portion of the 110,000-volt line between Centre avenue and Leland avenue was relocated in co-operation with Canadian National Railway revisions.

A patrolman's cottage was erected at Sibley on the Cameron Falls-Port Arthur, 110,000-volt line.

### NORTHERN ONTARIO SYSTEM

#### **Sudbury District**

Between Hunta—situated 10 miles west of Cochrane—and Sudbury, 189 miles of double-circuit, 132,000-volt, steel-tower line has been completed and placed in service. This line supplies 25-cycle power to the Sudbury district from the Island Falls plant of the Ontario Power and Service Corporation in the Abitibi Canyon. Power is delivered at Hunta over the corporation lines.

Between Coniston generating station and Sudbury, a total distance of 10 miles, 5.5 miles of single-circuit, 22,000-volt line, complete with telephone circuit, was constructed. This new construction makes the whole line accessible by roadway. The balance of the line was reinforced by erecting heavier conductor.

### **TELEPHONE LINES—ALL SYSTEMS**

At Chats Falls, the Gatineau-Leaside telephone circuit was looped in and out of the generating station. Along with the circuit to the Madawaska district, these circuits were connected through telephone cables to a switchboard in the control room. This has done away with the necessity of telephone switching at Galetta generating station. The telephone line is now a direct line between Leaside and Chats Falls, a distance of 200.6 miles, where calls are switched to Pagan or the Madawaska district. The telephone service on this line is now excellent.

Between Dundas transformer station and Dundurn municipal station, Hamilton, the open-wire telephone circuits were replaced with a 25-pair telephone cable. This cable provides telephone service from Dundas transformer station to operating offices, located in Hamilton. The cable, besides providing additional circuits, ensures reliable service under all weather conditions.

Between St. Thomas and Aylmer, and between Amherstburg and Harrow, the old iron telephone circuits were replaced with new copper circuits and co-ordinated with the power circuits, thus giving improved service for the operation of these lines.

In the Niagara system, copper telephone circuits were erected and placed in service on a number of new 13,200-volt transmission lines for use in operation.

In the Georgian Bay system, between Eugenia and Markdale, the old iron telephone circuit was replaced with a new copper circuit co-ordinated with the power. This enables satisfactory conversation to be carried on between the head office at Toronto and the operating field office at Markdale.

In connection with the rehabilitation of lines purchased in the Bruce district, telephone circuits were provided to link up with the Hydro system and provide for the operation of these lines.

In the Eastern Ontario system, the old telephone circuit between Heely Falls generating station and the Belleville operating office, was replaced with a new copper circuit. The service is now much improved.

Between Smiths Falls junction and the field operating office, a new telephone circuit was erected and placed in service.

In the Northern Ontario system, a telephone circuit, 190 miles in length, has been completed between Hunta and Copper Cliff. This parallels closely the new 132,000-volt transmission line and is used for its operation. In addition, short tap lines were built connecting the various patrol stations to the main line. A telephone line was built from Copper Cliff to Sudbury giving communication with the operating office at Sudbury from any point on the line.

Between Sudbury and Wahnapiatae Lake control dam, the telephone line was, in part, rebuilt and new copper conductor provided throughout. This new line has since been satisfactorily used for long distance calls.

## DISTRIBUTION AND RURAL SYSTEMS

The work carried on by the Distribution section of the Electrical Engineering department covers the engineering for the construction of rural lines, distribution feeder lines, metering equipments, distribution systems for municipalities, etc. A tabular report of the work done during the past year may be found in Appendix III of this report.

## SECTION VII

### THE LABORATORIES

During the past year work in the Laboratories has been well maintained and the total volume of work has approximated that of last year.

There has been an increase in routine testing which is an encouraging sign as it is an index of aid given in the operation of the Commission's systems. This work may be designated as "control testing" since it gives information as to the quality of materials and equipment in service and gives warning of deterioration or failure. It also in many cases leads to research work of major importance to the Commission, an example of which may be found in what has been accomplished in improvement of transformer oils.

The testing work for organizations outside the Commission has also increased and has included calibration of meters, efficiency tests on electrical equipment and tests on concrete. The main research activities of the department have been in the fields of concrete, protective coatings, radio interference, and grounding of electrical systems. These activities are described in greater detail below.

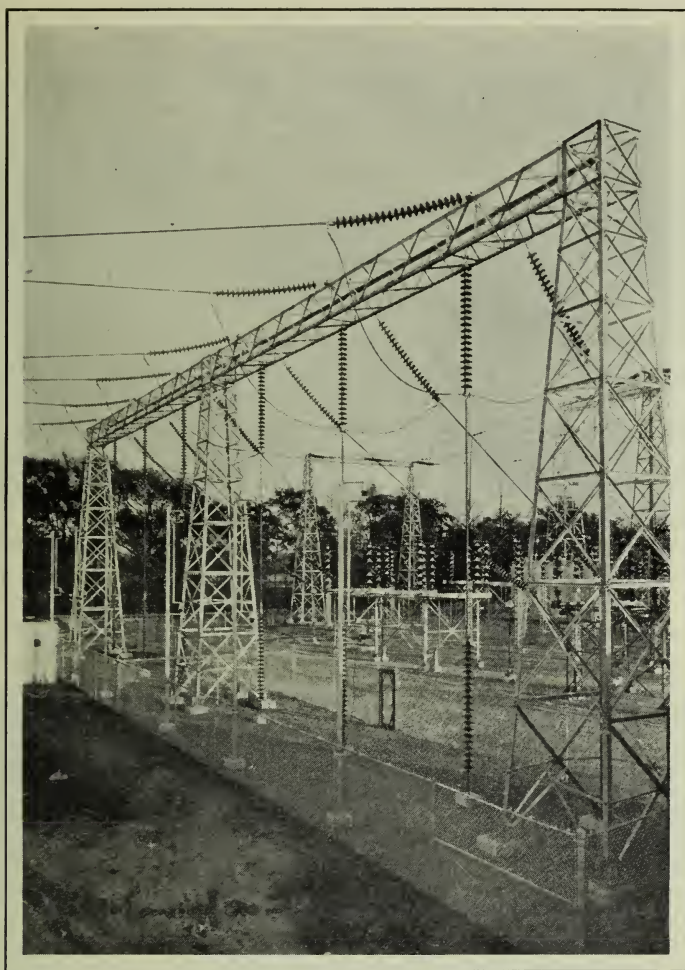
The inspection of equipment and material purchased by the Commission has been of increasing importance as a major activity of the department. This work has been thoroughly organized and efforts are continually made to correlate shop inspection with field experience. The department is accumulating a fund of information on the properties of materials which is of increasing value in the work of inspection, and which is made available to the Engineering departments to assist them in the design of new structures.

The Approvals Laboratory has been busier than at any previous time in its existence, although its revenue has decreased as compared with last year. The general depression has been the cause of the decrease in the sale of labels, but it has also brought about an increase in the number of applications for approval on new types of equipment. Evidently, manufacturers have endeavoured to improve their position during hard times by marketing a greater variety of equipment.

Considerable trouble has been encountered during the year in the enforcement of the regulations respecting the sale of electrical equipment. A large number of manufacturers of unapproved and dangerous waterheaters endeavoured to flood the market. These heaters were sold by itinerant vendors or by mail order, and it was extremely difficult to detect them. This important part of the work of the department is a direct charge against operation for which no revenue can be obtained.

The Electrical Inspection division has suffered a decrease in revenue, which is, of course, the result of a recession in building activity in the Province.





LEASIDE TRANSFORMER STATION—KLYDONOGRAPH STRUCTURE

Banks 3 to 6, October 21, 1931

### High-Tension and General Electrical Laboratory

The general electrical testing of the Laboratory continues to be quite wide in variety and of considerable amount. The range of equipment available for testing, as mentioned in previous reports, is extensive and these facilities have been useful not only to members of the Laboratory staff but also to other engineers of the Commission and to the municipalities.

#### Shop Inspection

The inspection of equipment at the factory has continued regularly throughout the year, the most important work relating to the generating, transformer and control equipment for Chats Falls Development, and the

transformer station and its control equipment at Leaside. A reduced volume of business in porcelain insulators however was experienced.

### **Routine Testing**

As much as possible of the continuous testing work of the Laboratory is standardized both as to methods of handling and as to the equipment used. This promotes efficiency in operation and ensures a basis on which comparisons may be valid. Distribution transformers have been inspected and tested for various departments during the year and repairs arranged for when necessary. More than 10,000 pairs of linemen's rubber gloves were tested, and dielectric tests made on 6,000 samples of transformer and switch oil.

### **Ground Testing**

A large amount of work was done in committee and elsewhere pertaining to a much more extensive survey of the resistance of driven grounds established at consumers' services and also the values of the ground connections on consumers' premises. Some sixteen hundred values were analyzed for suggestions as to general methods of classification and possible methods of improvement in the most economical manner under the various conditions. This investigation is still proceeding.

An extensive series of tests were made on tower-footing resistances on the 220,000-volt line from Chats Falls to Leaside. This was done with the purpose of rendering the line immune, as far as possible, to hazards from lightning. Attention was concentrated on the sections where rock-footings are the rule, experience having shown these sections to be the most exposed on these lines.

### **Radio Interference**

Close attention has been given to developments in the problem of radio interference and close co-operation is afforded the Radio Interference Branch of the Department of Marine and Fisheries in any activity associated with the Commission's properties. The question of radio interference is very important from the operating point of view, and it is essential that the Commission be well informed at all times respecting the technical aspects of this problem.

## **Meter and Standards Laboratory**

### **General**

Laboratory standard meters have been in continuous service and against these standards nearly two hundred calibrations of various instruments have been made during the year.

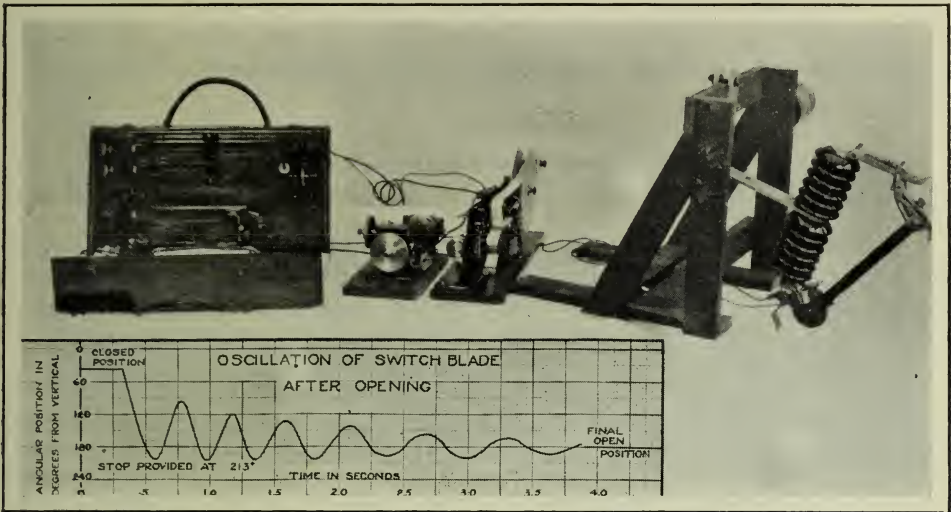
A portable two-element oscillograph was added to the equipment during the year and because of its economy in operation has been very useful.

A new model of earth-resistance tester was investigated and a considerable number purchased by the Commission for the use of inspectors and rural superintendents.

A new type of watt-hour meter, which may be supplied with a demand attachment, was also investigated and a report made upon it.

### **Meter Repairs**

More than thirteen hundred and fifty watt-hour meters were repaired during the year, a large number of these having demand attachments. Various other types of instruments also were repaired for the use of the staff and for



CHRONOGRAPH TEST ON TIME OF OPERATION OF FUSED DISCONNECTING-SWITCH  
Electrical Laboratory



THREE OSCILLOGRAPHS BEING OPERATED SIMULTANEOUSLY WITH TWO MORE AT  
TWO HUNDRED MILES DISTANCE



outside parties as well, the principal types including forty-three meggers and resistance bridges, thirteen time switches and thirteen graphic meters.

The instrument repair shop has been uniformly busy throughout the year in supplementing the work of all sections of the Laboratories.

## **Illumination Laboratory**

### **Lamp Testing**

The testing of "Hydro" lamps proceeds continuously from year to year and with respect to the routine tests each year's work is largely a repetition of that of previous years. Occasions frequently arise which necessitate special tests to reveal additional information.

In accordance with the specifications the inspector at the factory systematically selects a percentage of each batch of lamps being manufactured, inspects them for defects and measures the rating of them. If satisfactory according to these tests a further selection of lamps, representative of the average, is made for life testing. During the year the inspector handled in this way 16,000 lamps, and 2,350 lamps were life tested at the laboratory. By this means a close check on the quality of the lamps is assured.

The use of inside frosted bulbs has been extended to the larger sizes up to and including 1,000 watts. These larger sizes, above 100 watts, may be obtained at slightly increased cost. The inside frosting is not of particular value in many cases but for indirect lighting it adds much to the appearance of rooms by diffusing the shadows of the supporting chains or rods and the edges of the illuminated areas on the ceilings.

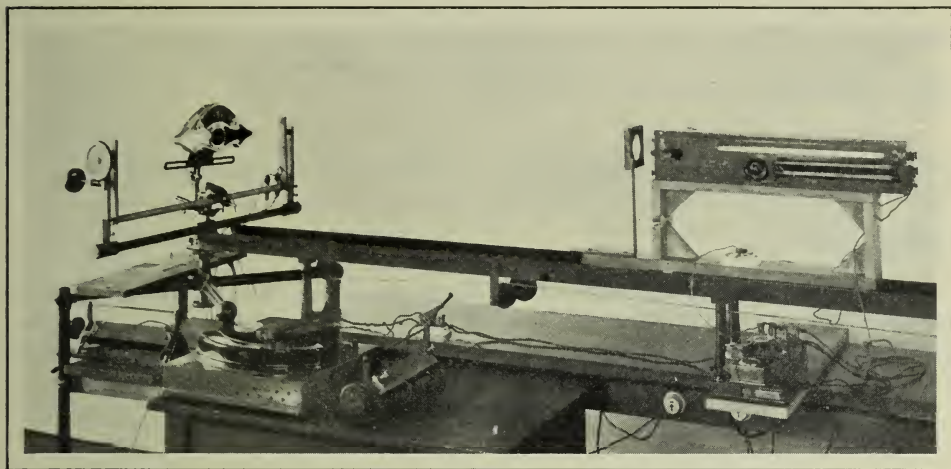
### **Tests of Lighting Equipment**

Several tests of street-lighting fixtures and glassware were made. These tests were for the purpose of obtaining data regarding the efficiency of the glassware. There is a very wide range of efficiency of lighting glassware and with differences in price a test is the only means of obtaining the information necessary as a basis for intelligent selection.

### **Lighting Service**

The importance of properly designed lighting is being more widely recognized as the benefits resulting therefrom are becoming evident.

The local "Hydro" municipal managers are usually active in promoting the affairs of their municipalities, and as a result of this they are usually aware of changes or extensions involving lighting. We have been able to render very valuable service to many of these managers who make use of our facilities. The number of requests for recommendations regarding lighting has been 50 per cent higher than during any previous year. Requests for this service have been steadily increasing year by year but there are many municipal managers who have not taken advantage of it. The normal operation of the Illumination Laboratory keeps the Commission in close touch with developments in lighting equipment and methods, and this experience is available to all users of the Commission's power.



TEST ON TURN SIGNAL FOR AUTOMOBILES  
Illumination Laboratory

### Automobile Lighting

The Illumination Laboratory is the testing and consulting agency for the Ontario Department of Public Highways on all matters relating to the use of light on automobiles for safety or signalling.

A new test was developed during the year for "left turn" signals submitted for approval in accordance with an amendment to The Highway Traffic Act. It was necessary to conduct experiments and observations to determine the form, colour, area and intensity of signals and to draft specifications to govern the rating of signals for this purpose.

The testing of reflective signals for use on trucks has been continued, twelve being tested during the year.

In addition to standardized tests a large number of examinations of lighting and signalling devices was made and the results reported. These are principally in connection with the merits of tentative designs.

## Recent Developments in Lamps and Illumination

### Tubular Lamps

The trend of illumination design of the modernistic type has resulted in the development of a number of lamps designed to suit the particular needs of this type of lighting. These lamps are tubular in shape and range in length from about 12" to 34" and are of 150 and 100 watts rating. Placed behind panels of diffusing glass these lamps greatly simplify the attainment of a good appearance free from the spottiness which is difficult to overcome with lamps of the more common types. These lamps are also well suited to indirect lighting from troughs

where space for troughs and coves is limited. On account of special features in design these lamps are of lower efficiency than lamps of similar watts rating but of regular service construction. They are recommended for use only when the advantages of their construction outweigh the sacrifice in efficiency.

#### **Ultra Violet Lamps**

There are several small ultra-violet lamps available that are found to be useful in poultry houses and brooders in increasing egg production and improving the growth and health of poultry stock.

#### **Floodlighting**

In the design of office and similar large buildings the provision for floodlighting is being considered as an integral part of the building design. Furthermore, the appearance of the flood-lighted building has an influence on the design of the details of the exterior.

#### **Night-time Athletics**

Lighting for outdoor sports is growing in favour in both large and small municipalities. Commercialized sport has found that in many cases the increased attendance at night is more than enough to pay in one season for the lighting installation.

### **Engineering Materials Laboratory**

The Engineering Materials Laboratory has been quite busy during the past year, some two thousand different samples having been received and tested. The kind of testing done has been much the same as in the past; namely, cement, concrete and concrete aggregates, steel and other metals, clamps, wire, insulators, and other materials used by a large utility such as the Hydro undertaking.

#### **Research**

While, because of other work, only a small amount of research has been attempted, some results of interest have been obtained and these will be briefly mentioned. The workability of concrete mixtures is a fundamental property of great importance in the building of durable concrete structures, but one which to date has defied measurement. Recently two new methods of determining workability have been proposed by different investigators and these have been tried out in the Laboratory but with disappointing results.

A more successful research was the development of a method of waterproofing leaks that sometimes occur in concrete structures at joints or cracks, after completion. It was necessary not only to develop a material that would bond with the concrete and that would remain plastic at freezing temperatures, but also methods for its application. Both a satisfactory material and methods for its use were developed, and the practicability of the conclusions has since been demonstrated on several structures.

Tests to determine the proper protective treatment for structural steel that is to be embedded in concrete were continued this year, and the results to date seem to indicate that the present practice of painting steel with spar varnish is as satisfactory as any.



The difficulty, often experienced in large hydro-electric power developments, in securing a satisfactory supply of sand for concrete has led to the study of the use of artificial instead of natural sands for this purpose. Preliminary studies already completed show that artificial sands can be used successfully, and tests are now under way to determine when such sands are practicable and economical, and what effect, if any, their use would have on the durability of concrete made therefrom.

Another troublesome problem on which experimental work has been done is the development of methods of detecting unsound sands. It is very necessary to avoid unsound sands for if these are used in concrete or mortar, the concrete disintegrates rapidly. Using methods proposed by the American Society for Testing Materials and others, a number of Ontario sands of high quality were compared with a group of sands known to be unsound. The conclusion reached was that by the method of testing used, a sand that was grossly unsound could be detected, but that more complete information was needed before the test could be safely included in a specification.

An extensive investigation has been carried out on the efficiency of different types of welding rod. Typical welds were made with different kinds of rod, and these were tested to destruction and examined microscopically to determine the character of the metal deposited. The information obtained has proved very valuable in the Commission's welding work.

Other investigations undertaken by this department have had to do with splicing of wire and cable; with lock washers to prevent tower bolts from working loose; with the best type of anchor bolts for fastening fixtures and light apparatus to finished concrete, and with the reliability of compression tests as a measure of quality of concrete.

#### **Inspection of Concrete Structures**

The field inspection of concrete going into small structures has been given more attention this year than in the past and the system now followed appears to result both in obtaining proper records of the materials and methods used in each case, and also in helping the construction staff to make better concrete. Through close co-operation between the Construction, Engineering and Laboratory departments, it is possible to have all concrete materials such as cement, sand, stone and gravel checked as to suitability before use, and to predetermine the proper proportions of these that will make the quality of concrete required. Later, concrete from the job is tested and where requested, or circumstances warrant, an inspector visits the job while concreting is in progress. No substandard concrete has been observed on any of these smaller jobs this year.

Field inspection of concrete has been continued. The structures of the Queenston-Chippawa, Ontario Power, Big Chute, Eugenia, Nipigon, and Alexander developments were examined during the year, and in addition a limited number of foreign structures were inspected in connection with the general investigation of the disintegration of concrete.

Several items of new equipment were added during the year, the more important being a new cement briquette testing machine, a new flow table for controlling the workability of concrete, and a small rock crusher.

### Inspection of Materials and Equipment

Although a decrease in the volume of inspection work might have been expected during the past year, the reverse conditions prevailed. This was due, in part, to a widening of the field of activities, and in part to the large amount of work involved in supervising the shop construction for the Chats Falls and Beauharnois developments.

Apart from special problems, the character of inspection done by the Laboratory does not vary much from year to year. The materials requiring inspection are very diversified in character, and the sources of supply scattered over a wide area involving a large amount of detail work and much travelling. The Laboratory retains resident inspectors at several of the larger industrial centres, and during the past year has inspected materials in more than forty different plants.

Due to the widespread adoption of welding as a process of fabrication, it was considered advisable during the past year to make a special study of the process. One of our engineers spent several weeks in a large plant in the United States where welding is an important method of manufacturing. The various features and characteristics of welding were carefully studied and reported upon and the information gained has been found most useful in the inspection of equipment fabricated by this method for the Commission. Not only has this knowledge been useful to the Commission, but through the inspectors it has been of assistance in improving the shop welding methods of the smaller plants whose welders are frequently self-taught and do not fully understand the principles involved.

### Special Tests

Several groups of tests have been carried out for outside companies. This work has included tests on concrete, concrete aggregates, oils, paints, and other materials.

The department has co-operated closely with the Chats Falls Engineering Board, and a number of tests have been made at its request. A senior concrete inspector was lent to the Board, who had charge of the inspection of the concrete during construction of the dam and powerhouse. Other men have been lent when required, to assist in the erection of the power-house steel and the welding of the turbines.

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#### PHOTOGRAPHS TAKEN IN THE STUDIO DURING 1931

Description of Illustrations on opposite page

Column I	Column II	Column III
Equipment used in chopping mill tests.	Apparatus for soil analysis.	Aerial mosaic.
Sludge formed in different oils.	Photographs of uses of electricity on farm, assembled for ready use.	Insulators destroyed in service.
Experimental grinder for chopping mill.	Illuminated address.	Microphotograph of steel.
Method of testing inserts in concrete.	Illustrations for resuscitation instruction.	Load curves.
Glove worn by injured lineman.		Goggles that saved a serious accident, and piece of metal that broke them.
Page from special album.	Copy of connection diagram.	Reflex signal test.





PHOTOGRAPHS REPRESENTATIVE OF THOSE TAKEN IN THE STUDIO DURING 1931;  
INDICATING THE WIDE RANGE OF WORK COVERED

For Description of above see facing page



## Chemical Laboratory

The Chemical Laboratory has had the busiest year in its history. The work has been varied in character, including all of the types of testing reported in previous years, and several special investigations of some magnitude.

### Special Tests and Investigations

The department assisted the Engineering Materials Laboratory in the development of a suitable material for waterproofing joints and cracks in concrete but has carried the work somewhat further than was necessary for that purpose and made a general study of plastic materials for these and allied uses.

Research work on the disintegration of concrete has been continued. Field examinations of several decayed concretes were made and a survey of the literature on the effect of acid waters on concrete, completed and summarized in a report.

Encouraging results have been obtained on the reconditioning of insulator oils that have deteriorated in service. A 6,000-gallon test run of bad oil was made at the Ontario Power Generating station, and the results indicated that the treated oil has been returned to first-class condition. Further studies are now underway to develop portable equipment for carrying out the process in the field.

Investigation of paint problems has been continued. The increasing use of synthetic resins and gums in the manufacture of paint has created a new problem for the user as the ordinary methods of judging the quality of paints and varnishes do not apply where these materials are used. In order to meet this situation, the Laboratory has done experimental work on this type of finishes and as a result can now evaluate those offered with some accuracy. In addition to these tests and the routine examination of paint purchases, a special series of comparative tests on twenty standard brands of mill white gloss paint have been completed.

Tests and reports were also made on the following: materials for treating water to stop scale formation and corrosion of circulating water pipes; explosive possibilities of creosote in connection with the explosion at North Bay; properties of petroleum cleaners; special finish for aluminum surfaces; used motor oil; special floor finishes; corroded cooling coils; specification for governor oil; wooden penstock preservation; removing scale from cooling pipes, and conductivity tests on aluminum paint.

## Photographic Branch

The character and volume of work done by this department remains about the same as last year. A trip was made over the Eastern system, and views were taken of all power stations there. Progress pictures were taken regularly of construction work carried on by the Commission at Leaside and elsewhere. Pictures were taken from the air of the International Ploughing Match recently held in Peterborough, and night pictures of an illuminated sports field in the village of Alma, Ontario, to demonstrate the progress that the application of electricity is making in the rural communities.

A new 10-inch panoramic camera was added to the equipment of the department.

### Blueprinting Department

The Blueprinting department has been exceptionally busy during the past year, having completed approximately 40,000 square yards of finished prints. About 95 per cent. of all blueprints used by the Commission are now handled by this department.

### Approvals Laboratory

A summary of the applications for approval of electrical equipment indicates a steady growth in the work of this section. For regular reports 757 applications were received. Of these, 103 referred to power-operated radio devices, musical instruments and accessories, 114 to wiring devices including panelboards and fuses, and 190 to heating appliances. In these groups there was practically no increase. Applications for lighting devices to the number of 110 show an increase of 34 per cent. and motor-driven appliances including oil burners, refrigerators and clocks to the number of 204 increased 16 per cent. While this shows an overall increase of only 16 per cent over the previous year there was an increase of 85 per cent. in the applications, to the number of 154, for special reports, temporary approval and limited label service which are not included in the above total. A decrease is again shown in the applications, to the number of 105, for listing of devices approved by Underwriters' Laboratories, as many devices which formerly have been submitted without test and report, are now included in the regular list due to differences in requirements between the Canadian and the United States Codes.

There have been 390 final approval reports completed—an increase of 73 per cent; and on October 31, 1931, there were 414 applications on the active list—an increase of 29 per cent. This work is being handled by six engineers.

The approval record has been substantially increased, 553 white card summaries having been printed—an increase of 68 per cent.; although only 139 green cards listing devices approved by Underwriters' Laboratories were issued—this being a decrease of 30 per cent. During the year, the printed list in pamphlet form was reissued as the second edition and two supplements were also distributed, the "B" supplement being distributed within thirty days of the issue of the listings included in it. These lists appear to fill a real need on the part of the purchasing section of the electrical trade.

Factory or field inspection work continues to increase as new submitters are added to the approval list. For re-examination inspection, 743 factories were visited and 921 inspections made—only a small percentage of these being duplicated during the year and 257 of these inspections were made in American factories. For label service inspection, 1,262 factories were visited and 2,199 inspections were made; many of these factories are visited monthly or more often, and 129 of these inspections were made in the United States.

The sales of approval labels show an increase of 13 per cent over the previous year; although there was a decrease in the number of transfer labels sold there was an increase in metal labels for signs and panelboards to the extent of 92 per cent. The increasing use of the dead front range fuse cutout base combined

with lighting distribution fuses accounts for a large part of this increase. Labels for rigid conduit were prepared and issued and several new label services are in course of preparation at this time. It is hoped to have power-operated radios, portable window display signs, electric clocks and fixtures all covered within the next three months.

Several specifications have been completed for laboratory use and much activity is seen in this work at the present time. In addition to those referred to in the last report portable window display signs, electric clocks, fixtures, hair-dressing appliances, toaster stoves, cigar lighters, enclosed panelboards, electrical equipment for oil burners, branch circuit breakers and enclosed switches have been covered by drafts and in several cases put into effect immediately.

In spite of the handicap imposed by lack of space in which to expand several improvements have been made in the equipment of this section. A new lamp-bank resistance load in which gas-filled lamps are employed has been added to the endurance-testing machine. Many new jigs and movements for operating snap switches and sockets have also been provided and several refinements added to ensure uniform and fair testing facilities. The torsional testing machine for socket shells, etc., has been rebuilt in more substantial form.

It can be safely said that the adherence of the laboratory engineers to the principles set out in the Canadian Electrical Code has resulted in improved and safer electrical construction of many lines of equipment now being distributed in Canada.

## ELECTRICAL INSPECTION DIVISION

The Electrical Inspection Department has now been in operation for a period of sixteen years. The department was formed, in the latter part of 1915, to supervise the carrying out of Rules and Regulations governing electrical installations in the Province of Ontario. The Province is, at present, divided into thirty-two electrical inspection districts, each being under the supervision of a district inspector, who is responsible to the head office in Toronto. A staff of sixty-three inspectors is employed by the department. These men are located at strategic points throughout the Province, thus enabling the organization to give efficient service at a minimum cost.

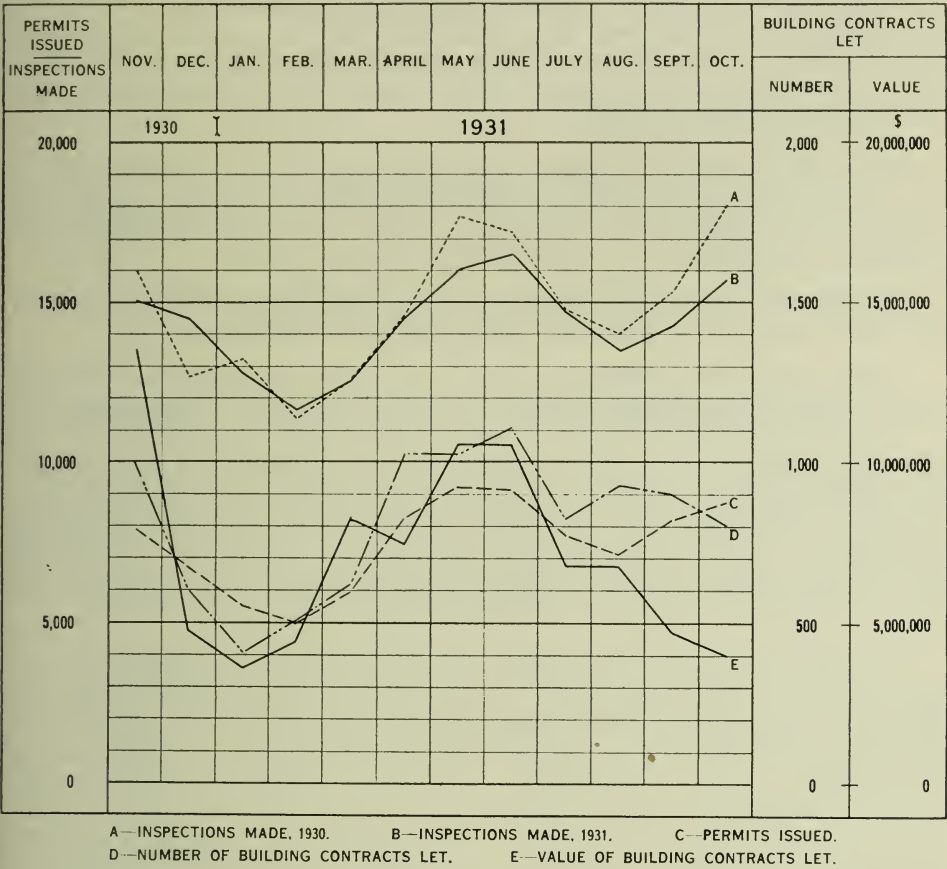
The number of paid applications for inspection received during the past fiscal year amounted to 89,760, a decrease of 5.8 per cent from the previous year and 3.6 per cent. below the average for the last six years.

A total of 177,782 inspections was made, a decrease of 4.9 per cent from 1930.

The volume of business transacted by the department is, to some extent, governed by the amount of building construction throughout the Province. The building statistics given, herein, have in the past, proved an excellent barometer of the condition of the electrical trade.

In Toronto, 1,245 building contracts were let in 1931, as against 1,448 in 1930, a decrease of 203 or 14 per cent. The value of these contracts for 1931 was \$85,087,900 as compared to \$116,203,200 for 1930, a decrease in value of \$31,115,300 or 27 per cent.





The accompanying diagram illustrates the close relation of the building trade to the volume of business handled by the department.

Six fires were found to have been caused by defective wiring or apparatus.

Five persons were electrocuted by coming into contact with live equipment. The causes have been classified as follows:

Two electrocuted within one hour, on the same premises, one using portable cord equipped with brass-shelled socket which proved defective, the other when inserting a lamp in a brass-shelled socket while standing on grounded material. Voltage 110.

One touched a metal-clad building which had become charged with an electric current through a defective switch. Voltage 550.

One, accidental contact with switch gear in a paper mill. Voltage 11,000.

One, breakdown in elevator control drum, which in turn charged control cable. Voltage 550.

A cow was also electrocuted while attempting to drink from an automatic watering system in a barn. The water piping had become charged with electric current owing to a breakdown of an electrical circuit in a conduit system, which was, in turn, in contact with the water system. This accident again brings to notice the fact that isolated water systems, such as the aforementioned, cannot be classed as reliable grounds.

The regular routine of inspecting a certain number of the older and more obsolete types of installation, in which life and fire hazards are usually found to exist, was carried out as heretofore. Some 3,611 such installations were rewired or overhauled at an approximate cost of \$319,195.

The district of Bancroft, which had been closed for a number of years and the work handled from Belleville, was reopened in September, 1931.

The third annual meeting of the district electrical inspectors took place at the Prince George Hotel, Toronto, on March 5 and 6. Matters pertaining to office routine, accounting and general departmental procedure were first thoroughly discussed and several suggestions for improvement were adopted. The balance of the session was taken up by discussion and interpretation of the Rules and Regulations, after which a tour was made of the Commission's Laboratory. This meeting was the most successful held so far. The ground work of the two previous gatherings was quite evident in the dispatch with which matters were handled and in the questions which were taken up.

An important extension of the work of the Inspection department was made during the year in the matter of service grounds in rural localities. For many years the rules respecting grounding were not enforced in rural localities because of the difficulty of securing adequate grounds. As a result of the investigations of the Commission's Grounding Committee the department decided to require grounding of all such services and to make tests on the ground resistances at the time of installation. The Engineering department also began the work of improving ground resistances of transformers in order to bring them to as low a value as possible (not greater than 25 ohms). The experience of the past six months in this work has been encouraging, and it is confidently expected that the continued co-operation between the Inspection and Engineering departments will result in satisfactory conditions in rural localities. The importance of this result is increasing continually as the number of rural customers grows.

## SECTION VIII

### ELECTRIC RAILWAYS

#### SANDWICH, WINDSOR AND AMHERSTBURG RAILWAY

Effective July 31, 1931, and pursuant to the Sandwich, Windsor and Amherstburg Railway Act, 1930, the Commission conveyed the assets and undertaking of the railway to the Sandwich, Windsor and Amherstburg Railway Company, but continues to operate the railway on behalf of the Company by virtue of an operating agreement substantially in the form appearing in the said Act.

The Commission's bonds issued and outstanding in respect of this railway, amounting to \$5,816,205, are protected by a mortgage deed of trust in favour of the Guaranty Trust Company of Canada, at Windsor, Ontario, to whom were transferred the collateral municipal debentures securing the Commission's bonds.

#### Way and Structures

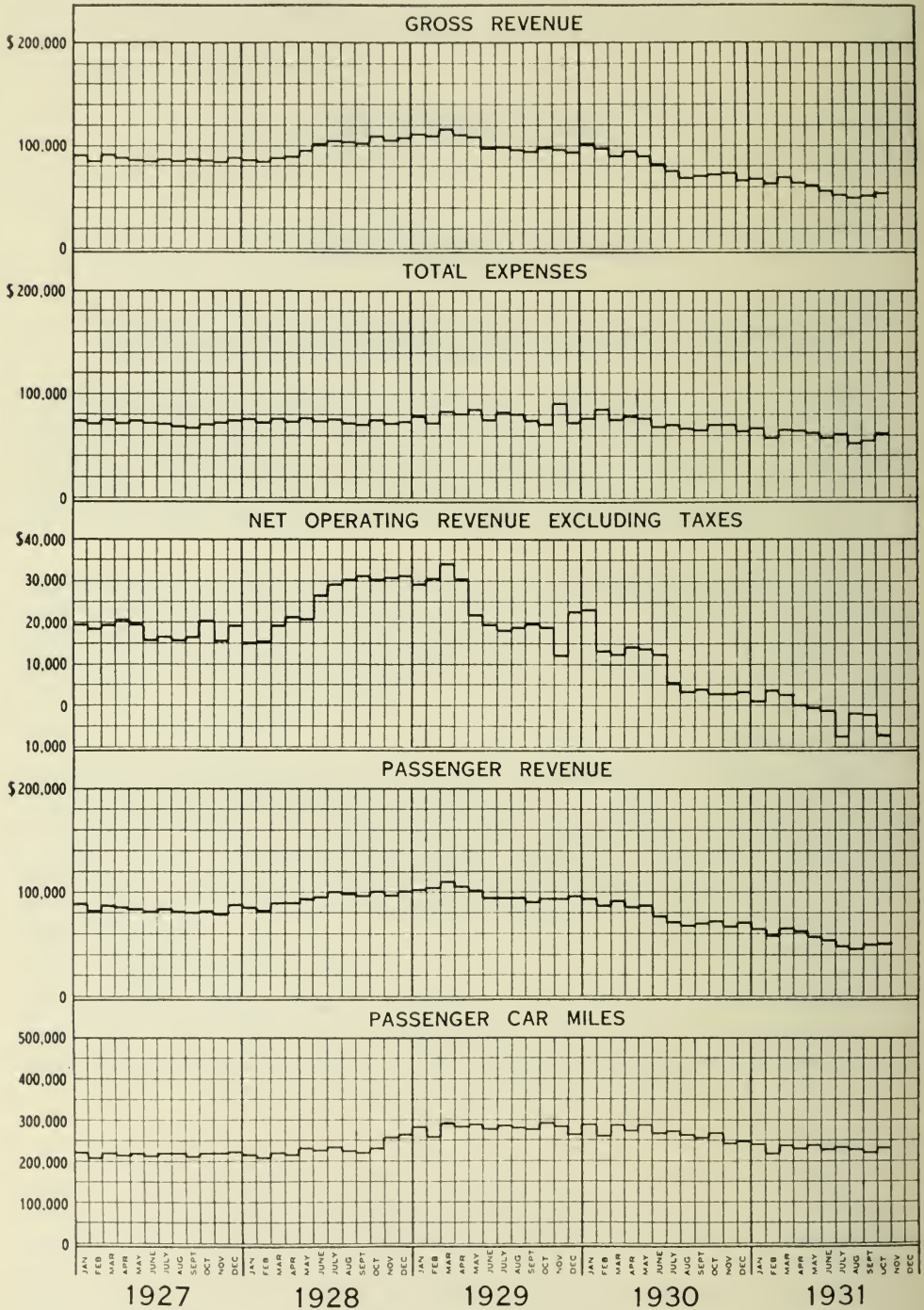
The construction of the new Wyandotte Street extension in Walkerville and East Windsor, commenced during the previous year, was continued, and under authorization of the Board of Railway Commissioners for Canada, the construction of the Pere Marquette subway was commenced on the 22nd of January. The extension of the double track street railway along the new street was constructed from Walker road in Walkerville to the east limits of the town only, the East Windsor portion of the track construction being deferred. The track work involved the removal of the loop at Walker road and the installation of standard monolithic double-track construction using 100-lb. A.R.A.-A. rail with thermit-welded joints and International twin steel ties. Operation over the new tracks commenced on the 9th of October, the street having been officially opened to vehicular traffic on the 3rd of that month.

#### Operation

In 1929, the passenger revenue was the largest in the history of the railway, amounting to \$1,191,768 which was 244 per cent of the 1921 revenue. In 1931 this amounted to \$687,471 or 141 per cent of the 1921 earnings. The 1929 gross earnings were \$1,241,041 or 245 per cent of the 1921 earnings. In 1931 the gross earnings dropped to \$726,044 or 143 per cent of the 1921 figure. The 1929 operating expenses were \$929,689 or 218 per cent of the 1921 expenses;



## SANDWICH, WINDSOR AND AMHERSTBURG RAILWAY OPERATING STATISTICS





SANDWICH, WINDSOR AND AMHERSTBURG RAILWAY

Wyandotte Street Extension in Walkerville and East Windsor, showing on the left the C.N.R. subway and on the right the Pere Marquette subway and at the bottom right, the Wyandotte Extension at the Ford motor plant.

in 1931 the expenses were \$732,184 or 172 per cent of the 1921 expenses. Net earnings in 1929 were \$311,353 or 393 per cent of the 1921 net. In 1931 there was an operating deficit of \$6,140 before credit received for the 13th power bill, which will likely wipe out this deficit.

The operation of jitney taxi cabs, at a 15-cent fare for four passengers in certain areas, has adversely affected passenger revenue to an extent estimated at from \$60,000 to \$80,000 during the year. It is expected that this condition will be remedied in the near future.

Bus operations have been gradually eliminated. The Howard Avenue line was discontinued on December 16, Campbell Avenue line on June 20, Lincoln Road on October 31.

The accompanying chart indicates the progress of the Railway for the past five years.

The mileage operated by the various types of cars and buses during the year is as follows: double truck, air brakes, two-man cars, 76,824 car-miles; interurban cars 527,542 car-miles; single truck safety cars 543,573 car-miles; double truck safety cars, 1,495,072 car-miles; express cars, 11,022 car-miles; buses, 146,481 bus-miles; service cars, 30,913 car-miles; total, 2,831,427 car and bus-miles.

### SANDWICH, WINDSOR AND AMHERSTBURG RAILWAY

#### Operating Statistics, 1931

Route-miles:	
City trolley.....	24.29
City bus.....	3.50
Amherstburg interurban.....	13.54
Tecumseh interurban.....	6.10
Total route-miles.....	47.43
Passenger and freight car-miles operated.....	2,800,514
Passenger and freight car-hours operated.....	298,813
Passengers carried.....	12,093,732
Percentage of transfer passengers to revenue passengers.....	18.822
Passenger cars operated.....	67
Passenger buses operated.....	10
Passengers carried per route-mile.....	254,980
Passengers carried per car-mile.....	4.335
Passengers carried per car-hour.....	40.847
Average mileage per car operated.....	39,448
Average mileage per bus operated.....	14,648
Average passengers per car operated.....	177,050
Average passengers per bus operated.....	23,137
Freight tonnage carried.....	1,471
Accidents 389 of which 264 were automobile accidents.	
Accidents per 100,000 car miles: 13.328.	

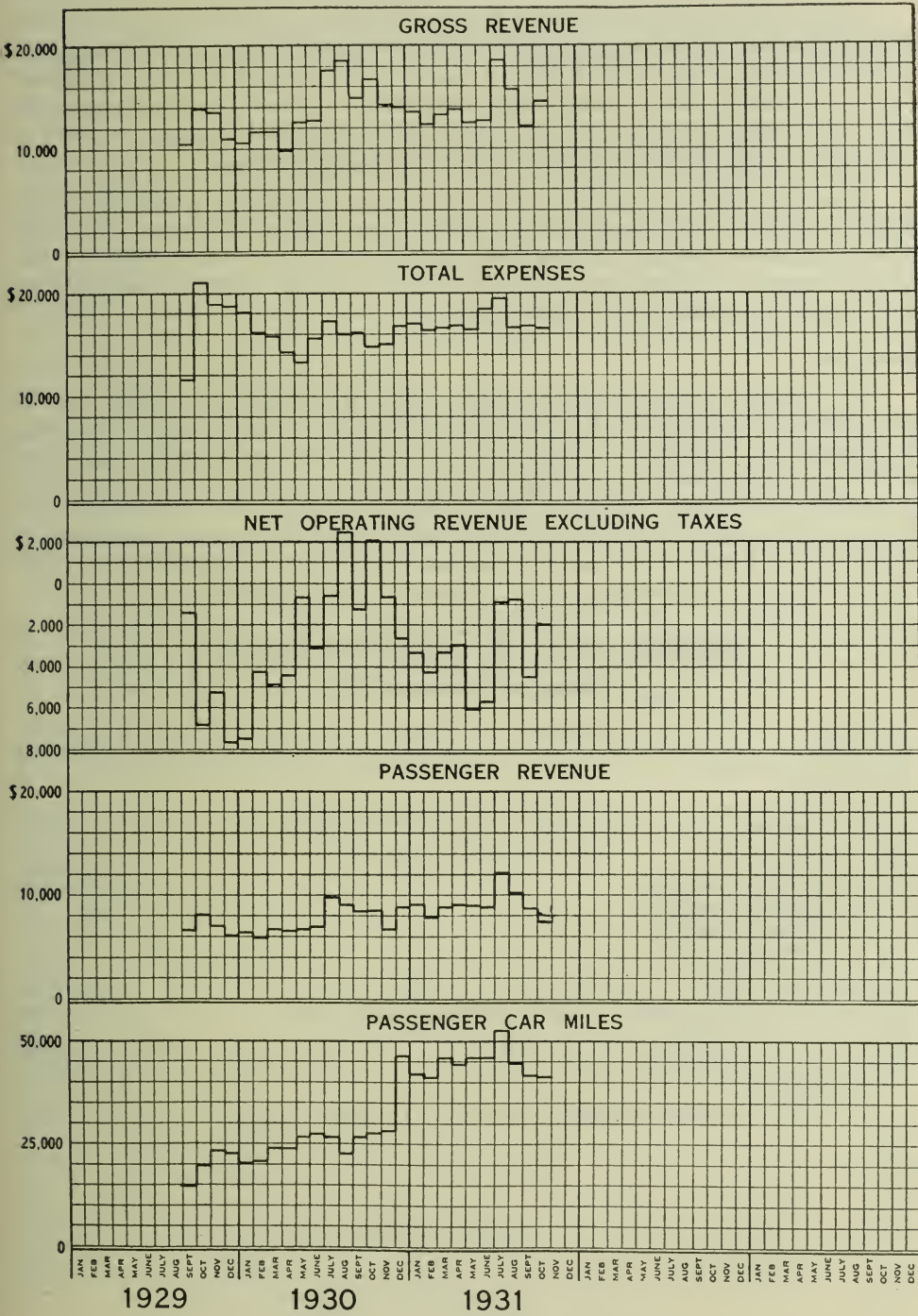
### WINDSOR, ESSEX & LAKE SHORE RAILWAY

On September 8, 1929, the operation of the Windsor, Essex and Lake Shore Rapid Railway was taken over by the Commission under agreement with the Windsor, Essex and Lake Shore Electric Railway Association, the latter body, representing a number of municipalities traversed by the railway, having purchased the line from the original owners, the Windsor, Essex and Lake Shore Rapid Railway Company, at a cost of \$296,000.

This railway consists of 36.12 miles of standard gauge single-track extending from the intersection of Pitt street and Ouelette avenue in downtown Windsor to Leamington, with numerous industrial sidings along the route. In Windsor, Essex, Cottam, Kingsville and Leamington the track is situated in the centre of the street, while on the balance of the line it is constructed on a narrow strip of private right-of-way of varying widths, adjacent to the highway.



WINDSOR, ESSEX AND LAKE SHORE RAILWAY  
OPERATING STATISTICS



### Way and Structures

Rehabilitation work on the track and overhead system was completed early in the year and the system has been maintained to a satisfactory standard.

A loop track was constructed on Howard avenue to provide for the operation of a local service. The loop is located at the south west corner of the intersection of Howard avenue and Grand Marais road, on land leased from the Michigan Central Railway. Block signals were installed on Howard avenue to govern both local and interurban services, and at Colchester siding near the town of Essex, this being the passing point for the interurban service.

The interlocking plant at Pelton, governing the grade crossings of the Windsor, Essex and Lake Shore and Michigan Central Railways, over the Pere Marquette Railway, having been destroyed by fire was rebuilt by the Pere Marquette Company, the Windsor, Essex and Lake Shore Railway's share of the cost of reconstruction being 20 per cent.

### Operation

In 1926 the revenue was \$245,000. This fell to \$158,000 in 1929 mainly on account of the dilapidated condition of the tracks and equipment. Following the complete rehabilitation of the system in 1930, it was anticipated that there would be a rapid growth in the business of the railway, which, with the resultant economies in operation, would enable the road to pay its way. Owing to the industrial depression in 1931 these expectations were not realized, the earnings amounting to \$166,713. Operating expenses amounted to \$202,546.51 including \$33,053.94 for the local service on Howard avenue, Windsor.

## WINDSOR, ESSEX AND LAKE SHORE RAILWAY

### Operating Statistics, 1931

Route-miles.....	39.747
Track-miles.....	45.802
Passenger cars operated.....	5
Buses operated.....	1
Passenger car-miles operated.....	466,121
Bus-miles operated.....	4,844
Freight locomotive miles.....	32,967
Express car-miles.....	14,840
Passenger car-hours operated.....	34,593
Passenger bus-hours operated.....	774
Revenue passengers carried.....	694,053
Transfer passengers carried.....	93,201
Free passengers carried.....	10,633
Total passengers carried.....	797,887
Percentage of transfer passengers to revenue passengers, local lines.....	18
Freight motor-cars operated.....	4
Freight motor-hours operated.....	5,224
Total passenger and freight car-miles operated.....	518,772

Accidents, 65.

Accidents per 100,000 car-miles, 12.5 in 1931; 21 in 1930.

## GUELPH DISTRICT RAILWAYS

### Way and Structures, and Equipment

The track and equipment of the system has been maintained to a satisfactory standard throughout the year. No capital construction has been undertaken.

### Operation

The operating revenue for the Guelph District Railways for 1931 was \$77,532 as compared with \$86,278 in 1930. The total operating expenses for the year 1931 were \$78,284 as compared with \$81,091 in 1930. Taxes for the year 1931 amounted to \$363 as compared with \$515 in 1930. The net operating shortage for the year 1931 was \$752 as compared with a net revenue of \$5,187 in 1930. The interest and debenture payments were \$26,954 as compared with \$26,900 in 1930. At the request of the Guelph City Council no renewal was set aside in 1931, in 1930, \$10,701 was set aside. The deficit for 1931 was \$29,649 as compared with \$32,929 in 1930.

Included in the above deficit is \$7,640 which has been set aside for amortizing the original value of the railway line previous to the transfer of this road to the Hydro-Electric Power Commission; and also an interest charge of \$4,060.

The freight earnings for the year 1931 were \$10,484 as compared with \$9,809 in 1930, but the number of passengers carried was 1,328,781 as compared with 1,608,906 in 1930.

Bus service on Suffolk avenue was substituted for car service and one bus operated on Eramosa hill. This latter service is not warranted by the business but the city required that this district be served. The operation of one bus on chartered trips earned \$3,348 and this business should increase.

The Canadian Gypsum Company is enlarging its sphere of operations which will be beneficial to the railway.

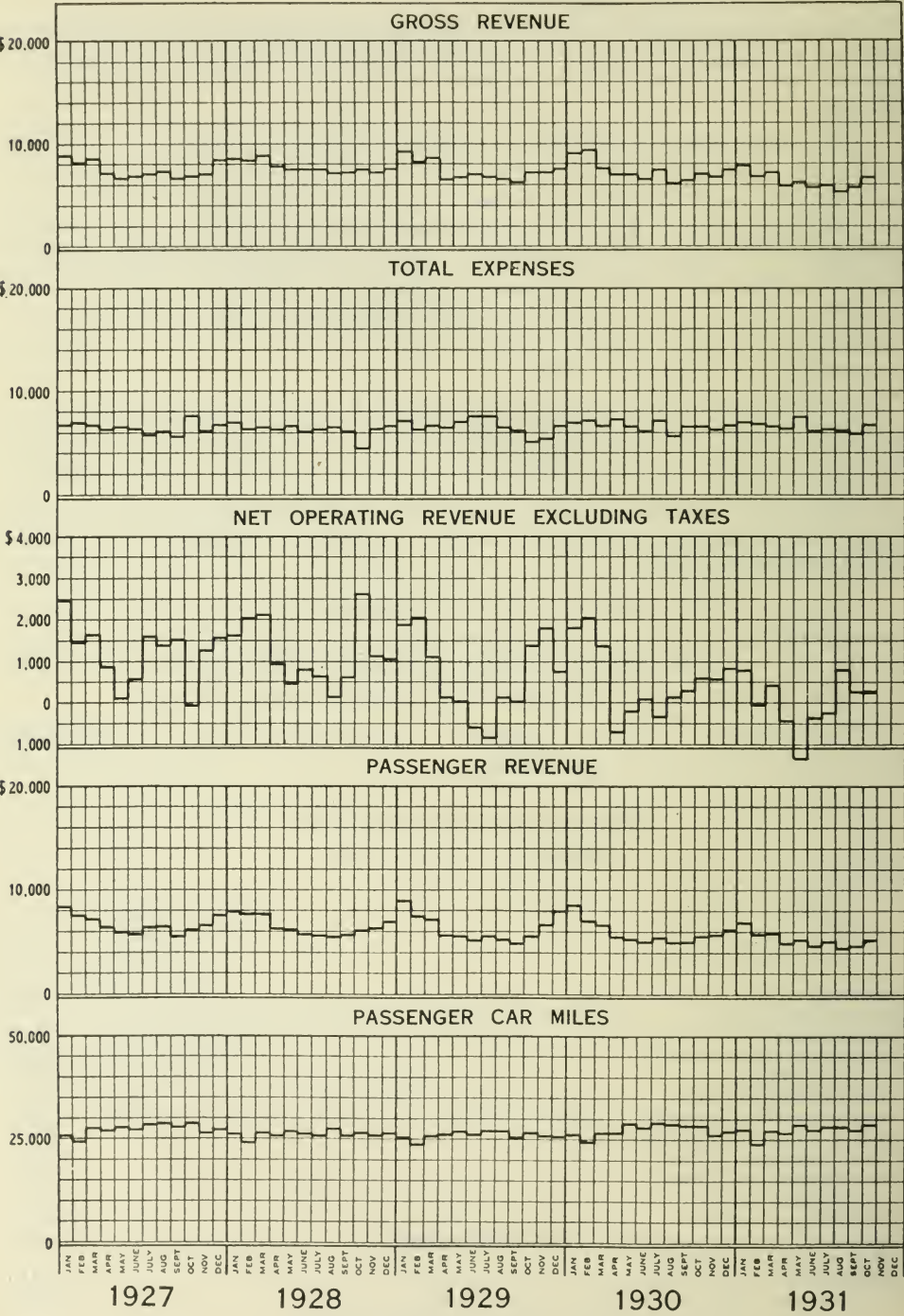
## GUELPH DISTRICT RAILWAYS

### Operating Statistics, 1931

Route-miles:		
Trolley.....	6.41	
Bus.....	2.65	
Total route-miles.....		9.06
Track-miles.....		8.50
Passenger cars operated.....		7
Buses operated.....		4
Passenger car-miles operated.....		230,063
Bus-miles operated.....		95,776
Freight locomotive miles.....		10,769
Passenger car-hours operated.....		27,645
Passenger bus-hours operated.....		13,985
Revenue passengers carried.....		1,119,806
Transfer passengers carried.....		281,067
Free passengers carried.....		908
Total passengers carried.....		1,401,781
Percentage of transfer passengers to revenue passengers.....		25.099
Freight motor cars operated.....		1
Freight motor-hours operated.....		2,459
Total passenger, freight and service car-miles operated.....		336,878
Accidents:—fifteen, of which ten were due to automobiles.		
Accidents per 100,000 car-miles—1927, 8.24; 1928, 4.25; 1929, 12.3; 1930, 7.2; 1931, 4.452.		



GUELPH DISTRICT RAILWAYS—OPERATING STATISTICS



## SECTION IX

### FINANCIAL STATEMENTS

#### Relating to Properties Operated by The Hydro-Electric Power Commission on Behalf of Municipalities

The following explanatory statement is submitted with a view to affording a satisfactory understanding of the manner in which the various operations of the Hydro-Electric Power Commission of Ontario are conducted and financed and thus contributing to the interest of those concerned either directly or indirectly with the work of the Commission.

The "Hydro" electrical undertaking of Ontario is an organization of a large number of partner municipalities co-ordinated into groups or systems for securing common action with respect to power supplies, through the medium of the Hydro-Electric Power Commission which under the Power Commission Act functions as their trustee. The undertaking as a whole, embracing all the operations from the provision of the power down to its final delivery to the ultimate consumer, involves two distinct phases of operations.

The FIRST phase of operations is the provision of the electrical power—either by generation or purchase—and its transformation, transmission and delivery in *wholesale* quantities to individual municipal utilities, to large industrial consumers, and to rural power districts. This phase of the operations is performed by the Hydro-Electric Power Commission of Ontario as trustee for the municipalities acting collectively in groups or "systems," and the financial statements relating to these collective activities of the municipalities are presented in this section of the Annual Report.

The SECOND phase of operations is the *retail* distribution of electrical energy to consumers within the limits of the areas served by the various municipal utilities and rural power districts. In the case of rural power districts, which usually embrace within their confines portions of more than one township, the Hydro-Electric Power Commission not only provides the power at wholesale, but also—on behalf of the respective individual townships—attends to all physical and financial operations connected with the distribution of energy at retail to the consumers within the rural power districts.\* The financial statements relating to the rural power districts are also presented in this section of the report. In the case of cities, towns, many villages and certain thickly populated areas of townships, retail distribution of electrical energy provided by the Commission is in general conducted by individual local municipal utility com-

\*For further information respecting rural power districts consult latter portion of Section III in this Report.

missions under the general supervision of the Hydro-Electric Power Commission of Ontario. The balance sheets, operating reports and statistical data relating to such individual electrical utilities are presented in Section X of this report.

Having the foregoing distinctions respecting wholesale and retail electrical service in mind, the following brief notes will assist to an understanding of the economic structure and of the general plan of administration of the undertaking, and will make clearer the financial tables herein presented. The basic principle governing the financial operations of the undertaking is that electrical service be given by the Commission to the municipalities and by the municipalities to the ultimate consumers at cost.

The charges for power supplied by the Commission to the various municipalities vary with the amounts of power used, the distances from the sources of supply and other factors. The entire capital cost of the various power developments and transmission systems is annually allocated to the connected municipalities and other wholesale power consumers, according to the relative use made of the lines and equipment. Each municipality assumes responsibility for that portion of property employed in providing and transmitting power for its use, together with such expenses—including the cost of purchased power if any—as are incidental to the provision and delivery of its wholesale power. The entire annual expenses—including appropriations for reserves—incurred by the Commission in the supply of power at wholesale are thus paid out of revenues collected in respect of such power, through the medium of power bills rendered by the Commission. The municipalities are billed at an estimated interim rate each month during the year and credit or debit adjustment is made at the end of the year,\* when the Commission's books are closed and the actual cost payable by each municipality for power received has been determined.

Included in the municipality's remittance to the Commission for the wholesale cost of power—besides such direct expenses as those for operation and maintenance of plant, for administration, and for interest on capital—are sums required to build up reserves for sinking fund, for renewals, and for obsolescence and contingencies. The first-mentioned reserve is for the purpose of liquidating the capital liabilities; consequently, as capital obligations are discharged the plant will progressively be freed from interest expense. The other reserves are, respectively, being created to provide funds for the replacing or rebuilding of plant as it wears out; to enable the undertaking to replace existing equipment with improved equipment as it becomes available through advances in science and invention, and to meet unforeseen expenses which from time to time may arise.

The ultimate source of all revenue to meet costs—whether for the larger operations of the Hydro-Electric Power Commission or for the smaller local operations of the municipalities—is, of course, the consumer. Out of the total revenue collected by each municipal utility from its consumers for service supplied, only an amount sufficient to pay the wholesale cost of power supplied by the Commission as outlined above is remitted to the Commission; the balance of municipal electrical revenue is retained to pay for the expense incurred by the local utility in distributing the electrical energy to its consumers.

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\*The financial year for the Commission ends on October 31. The financial year for the municipal electric utilities, however, ends on December 31, and the municipal accounts are made up to this date, and so recorded in Section X.



The results obtained by the annual adjustments of the Commission's capital investment, operating expenses and fixed charges, as they affect individual municipalities are shown in the tables for the respective systems. For the purpose of financial statement, the various systems are treated as separate units and for each of them similar statements and details are presented. Many of the pages which follow, therefore, simply repeat for each system data similar to those which are presented for the first system dealt with in each division of the report, namely, the Niagara system. In order, therefore, to possess a ready grasp of all the figures presented in this and other similar reports of the Commission, all that is necessary is to have a true understanding of the financial procedure followed in connection with one system and with one municipal "Hydro" utility.

The accounts of the Hydro-Electric Power Commission of Ontario are verified by auditors specially appointed by the Provincial Government. The accounts of the "Hydro" utility of each individual municipality are prepared according to approved and standard practice and are also duly audited.

### **Tabular Data**

The first tabular statement given in Section IX is a general balance sheet exhibiting the assets and liabilities of the undertaking and relates to the properties constructed or otherwise acquired and being operated by the Commission as trustee for the municipalities of the various systems.

The general balance sheet is followed by groups of statements relating in turn to each system of the Commission. These statements, for each system, are similar in character and include:—

**Operating Account** for the year, showing, for the system as a whole, the various items of operating expense and fixed charges entering into the cost of power as defined by the Power Commission Act, and the revenues collected by the Commission from the partner municipalities and other consumers.

**Cost of Power** statement, which shows the apportionment to each municipality or rural power district of the items of cost summarized in the Operating Account, as well as the apportionment of the capital expenditures listed in the balance sheet and the amount of power taken by each municipality. It should be appreciated that the cost of power given in this table is the wholesale cost,—that is, the cost which the Commission receives for the power delivered from the main transformer stations serving the local utility or rural power district. In the case of rural power districts, the costs of power for the respective districts appear also in the "Rural Operating" statement, immediately following, as "Cost of power delivered"; in the case of municipal electrical utilities not directly administered by the Commission, the respective costs of power appear in Statement "B" of Section X as "Power purchased."\*

**Rural Operating** statement, which shows for each rural power district the various items of cost, and the revenues received, in connection with the distribution of electrical energy to consumers.

**Credit or Charge** statement, which shows the adjustments made in order to bring the amounts paid by each municipal electric utility to the actual cost of service to that municipality. These credits and charges are taken up and given effect to in the municipal accounts of "Hydro" utilities before the operating records of each year are closed.

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\*Consult footnote on previous page.

**Reserve for Renewals**, which shows the provisions made for, the expenditures from, and the balances to the credit of, this fund.

**Reserve for Obsolescence and Contingencies**, which gives similar information with respect to this reserve.

**Sinking Fund** statement, which gives the accumulated total of the amounts paid by each municipality and rural power district as part of the cost of power together with its proportionate share of other sinking funds.

**Sinking Fund Reserve**, which summarizes the provisions made with respect to this fund.

All municipal "Hydro" utilities have current expenses to meet similar to the expenses of the Commission and have adopted the same financial procedure with respect to their operations. In other words, concurrently with the creation of funds to liquidate their debt to the Commission and to provide the necessary reserve to protect generating, transforming, and transmission systems, the municipalities are taking similar action with respect to their local "Hydro" utility systems.

The balance sheets, operating reports and statistical data appearing in Section X, under the heading of "Municipal Accounts," relate to the operation of local distribution systems by individual municipalities which have contracted with the Commission for their supply of electrical energy. To this section there is an explanatory introduction to which the reader is specially referred.

To illustrate further the foregoing explanatory comments, there is presented herewith a typical operating statement of an Ontario municipal electrical utility, covering its financial operations, both as a partner in a system of the Hydro-Electric Power Commission, and as administrator of its own local distribution system.

EAST WINDSOR "HYDRO" UTILITY

Operating Statement for the year 1931

REVENUE

Revenue from East Windsor "Hydro" customers for year . . . . . \$155,807.53

EXPENSES

*Representative illustration of expenses incurred by the Hydro-Electric Power Commission on behalf of a municipality in connection with the supplying of its electrical energy. These data really show—as determined by annual adjustment—what it costs the Commission to supply the municipality with its power. See "Cost of Power" statement, page 168, for the City of East Windsor as follows:*

Cost (proportionate share) of operation and maintenance expense of Niagara generating plants, transformer stations and transmission lines together with administrative expenses . . . . . \$40,630.96

Interest on East Windsor's proportionate share of capital investment in generating plants, transformer stations and transmission lines.....	\$35,838.82	
Sinking Fund (proportionate share) provided in respect of generating plants, transformer stations and transmission lines.....	7,898.55	
Renewal reserve (proportionate share) provided in respect of generating plants, transformer stations and transmission lines.....	6,049.44	
Obsolescence and contingencies reserve (proportionate share) provided in respect of generating plants, transformer stations and transmission lines—a reserve created to meet any unforeseen contingency or obsolescence expense.....	2,467 08	
		<u>\$92,884.85</u>

*Expenses incurred by a municipality through its utility commission in connection with the sale of electrical energy to consumers. Consult the section dealing with the Municipal Accounts:*

Operation, maintenance and administrative expenses...	\$29,686.12	
Interest and fixed charges on debenture debt.....	10,802.73	
Depreciation charge.....	7,065.00	
		<u>\$47,553.85</u>
Total expenses charged against revenue from customers of the East Windsor System.....		140,438.70
Net surplus for the year.....		<u>\$15,368.83</u>

The municipality of East Windsor, situated at the western end of the Niagara system, 240 miles distant from the source of power, Niagara Falls, Ontario, was connected to the system in November, 1922. This Hydro utility complied with every monetary obligation imposed upon it by the Power Commission Act. With the close of the ninth year of operation, this utility's total assets are \$568,322.59, liabilities, \$209,186.34, and reserves and surplus, \$359,136.25, as shown in the municipalities' balance sheets, in Section X, Statement "A."

By reference to this municipality's balance sheet, it will be noted that the East Windsor "Hydro" utility has created a sinking fund equity amounting to \$99,513.31 in the Hydro-Electric Power Commission System.

By reference to Statement "D" in Section X of this report it will be seen that under the low rate schedules prevailing throughout the Province, the rates in force in East Windsor have resulted in *average costs*\* to the various classes of service as follows: Domestic service (with an average monthly consumption per consumer of 129 kilowatt-hours) 1.8 cents per kilowatt-hour; commercial light service 2.4 cents per kilowatt-hour. The actual *rates in force* are presented in Statement "E" and particulars of street lighting service are given in Statement "C."

\*If proper differentiation be made by those undertaking research, between the very different entities of rates on the one hand and the derived quantities of average costs or revenues on the other, a great deal of confusion and misrepresentation will be avoided. Consult introduction to Statement "D" of Section X.



**HYDRO-ELECTRIC POWER**  
**Detailed Statement of Assets**  
*POWER UNDER*

ASSETS

Niagara System:

Generating Plants:

Queenston-Chippawa development.....	\$76,886,658.94
Ontario Power development, including water rights....	22,066,754.12
Toronto Power development, including water rights...	11,325,744.02

Transmission Lines:

Right-of-way.....	8,504,124.32
Steel tower and wood pole lines.....	23,921,698.18

Transformer stations.....	33,641,351.64
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\$176,346,331.22

Distribution Lines:

Rural power districts.....	\$5,794,903.28
Rural lines.....	35,527.44

5,830,430.72

\$182,176,761.94

Undertakings and Companies acquired as at January 1, 1930, from Dominion Power and Transmission Company, Limited, under purchase agreement dated April 2, 1930, and supplemental agreement dated August 14, 1930 (See balance sheet on page 160).....

21,489,434.83

Chats Falls Power development:

Expenditures to date..... 4,835,702.51

Thunder Bay System:

Nipigon generating plants.....	\$15,652,338.88
Transmission lines.....	1,902,190.15
Transformer stations.....	851,102.00

\$18,405,631.03

Distribution lines:

Rural power district.....	732.36
---------------------------	--------

18,406,363.39

Georgian Bay System:

Generating plants.....	\$3,760,172.25
Transmission lines.....	2,619,115.53
Transformer stations.....	1,134,260.26

\$7,513,548.04

Distribution lines:

Rural power districts.....	\$624,147.12
Rural lines.....	2,807.43
Local distribution systems.....	62,942.87

689,897.42

8,203,445.46

Eastern Ontario System:

Generating plants, including water rights..... \$11,282,761.58

Surveys and engineering re power sites:

On St. Lawrence River.....	\$734,873.31
On Ottawa River.....	96,254.85

831,128.16

Properties purchased for power sites..... 50,413.68

Transmission lines..... 4,094,548.61

Transformer stations..... 2,533,034.20

\$18,791,886.23

Rural power districts..... \$1,409,957.87

Local distribution systems:

Electric.....	905,746.29
Gas.....	26,137.37
Water.....	291,437.60

Rural lines..... 93,041.82

Pulp mill..... 52,559.93

2,778,880.88

21,570,767.11

Carried forward..... \$256,682,475.24

**COMMISSION OF ONTARIO**  
**and Liabilities, October 31, 1931**  
**TAKINGS**

**LIABILITIES**

To Province of Ontario:

Cash advances for Niagara and other systems.....	\$200,827,676.36	
Less: Repayment under provisions of Power Commission Act .....	12,450,495.97	
		\$188,377,180.39
Grant funds in the hands of the Commission to apply against rural power districts in course of construction or extension.....		113,266.19

Debentures issued by the Commission and guaranteed by the Province of Ontario:

Four per cent debentures, due 1957, issued in purchase of Ontario Power Company of Niagara Falls.....	\$8,000,000.00	
Interest accrued thereon.....	80,000.00	
		\$8,080,000.00
Six per cent debentures, due 1941, issued for the purpose of retiring the 1921 issue of the Ontario Power Company of Niagara Falls.....	\$3,200,000.00	
Interest accrued thereon.....	67,856.16	
		3,267,856.16
Six per cent debentures, due 1940, issued in purchase of the Toronto Power Company, Limited.....	\$413,200.00	
Interest accrued thereon.....	10,330.00	
		423,530.00
Six per cent debentures, due 1940, issued in purchase of certain electrical power equipment of the Toronto and York Radial Railway.....	\$205,800.00	
Interest accrued thereon.....	5,145.00	
		210,945.00
Five per cent debentures, due 1939, issued for the purpose of retiring the 1924 issue of the Toronto Power Company, Limited .....	\$4,000,000.00	
Interest accrued thereon.....	75,000.00	
		4,075,000.00
Four per cent debentures, due 1958, issued in purchase of distribution lines of Essex County.....	\$200,000.00	
Interest accrued thereon.....	3,333.34	
		203,333.34
Four per cent debentures, due 1958, issued in purchase of distribution lines in vicinity of Thorold.....	\$100,000.00	
Interest accrued thereon.....	1,666.67	
		101,666.67
Four and three-quarter per cent debentures, due 1970, issued in part purchase of Undertakings and Companies from Dominion Power and Transmission Company, Limited, as at January 1, 1930....	\$13,000,000.00	
Interest accrued thereon.....	206,397.00	
		13,206,397.00
Five per cent debentures, due 1935, issued in part purchase of Undertakings and Companies from Dominion Power and Transmission Company, Limited, as at January 1, 1930.....	\$8,000,000.00	
Interest accrued thereon.....	133,698.00	
		8,133,698.00
		\$37,702,426.17
Carried forward.....		\$226,192,872.75

**HYDRO-ELECTRIC POWER**  
**Detailed Statement of Assets**  
**POWER UNDER**

ASSETS

Brought forward .....		\$256,682,475.24	
Sudbury district:			
Properties, buildings, plant, equipment and water rights on Wahnapiatae river .....	\$2,506,391.99		
Transmission lines .....	138,765.48		
Transformer stations .....	41,730.99		
	<u>\$2,686,888.46</u>		
Local distribution systems .....	6,630.43		2,693,518.89
Abitibi—Sudbury line:			
Transmission line and equipment .....			2,082,077.92
Patricia district:			
Ear Falls generating plant .....			483,658.90
Bonnechere River Storage:			
Round Lake dam .....			51,629.23
Service Buildings and Equipment:			
Service building and equipment, Toronto .....	\$502,684.85		
Equipment of storehouse and garage, Hamilton .....	3,666.40		
Pole yard and equipment, Cobourg .....	<u>22,000.71</u>		528,351.96
Office Buildings:			
On University Avenue, Toronto .....	\$525,007.00		
On corner Elm Street and Centre Avenue, Toronto .....	<u>160,821.95</u>		685,828.95
Office Furniture and Equipment:			
At Toronto office .....	\$76,704.97		
At Electrical Inspection offices .....	<u>11,364.82</u>		88,069.79
Automobiles and Trucks .....			8,662.20
Inventories:			
Construction and maintenance tools and equipment .....	\$854,977.56		
Construction material and sundry supplies .....	888,935.09		
Maintenance material and supplies .....	602,409.40		
Stationery and office supplies .....	<u>27,106.23</u>		2,373,428.28
Sinking Funds:			
Employed to make repayments to the Province of Ontario under the terms of the Power Commission Act .....	\$12,450,495.97		
Employed in retirement of bonds issued or assumed by the Commission and guaranteed by the Province of Ontario .....	<u>6,476,787.14</u>		
	\$18,927,283.11		
Invested in securities of the Province of Ontario, which stand—			
(a) Deposited with Provincial Treasurer, par value, \$1,751,000.00 .....	\$1,726,489.26		
(b) In the hands of the Commission, par value, \$350,000.00 .....	359,775.82		
Interest accrued thereon .....	<u>27,427.22</u>		2,113,692.30
Carried forward .....			\$267,791,393.66



**COMMISSION OF ONTARIO  
and Liabilities, October, 31, 1931**

TAKINGS—Continued		LIABILITIES	
Brought forward.....			\$226,192,872.75
Bonds and debenture stock assumed by the Commission and guaranteed by the Province of Ontario:			
First mortgage 5 per cent. gold bonds, due 1943, of the Ontario Power Company of Niagara Falls:			
Amount assumed at date of purchase of Company by Commission, August 1, 1917.....	\$9,834,000.00		
Less: Retired by the Commission.....	1,817,000.00		
		\$8,017,000.00	
Interest accrued thereon.....	100,212.50		
			\$8,117,212.50
First mortgage 5% gold bonds, due 1945, of the Ontario Transmission Company, Limited:			
Amount assumed at date of purchase of Company by Commission, August 1, 1917.....	\$1,772,000.00		
Less: Retired by the Commission.....	437,000.00		
		\$1,335,000.00	
Interest thereon payable November 1, 1931	33,375.00		
			1,368,375.00
Guaranteed 4½% debenture stock, due 1941, of the Toronto Power Company, Limited:			
Amount assumed at date of purchase of Company by Commission, December 1, 1920.....	\$13,558,917.81		
Less: Retired by the Commission.....	7,036,031.98		
		\$6,522,885.83	
Interest thereon payable November 1, 1931	146,764.91		
			6,669,650.74
First mortgage 5% gold bonds, due 1933, of the Electrical Development Company of Ontario, Limited:			
Amount assumed at date of purchase of Company by Commission, December 1, 1920.....	\$4,335,000.00		
Less: Retired by the Commission.....	981,500.00		
		\$3,353,500.00	
Interest accrued thereon.....	27,945.83		
			3,381,445.83
Other debentures assumed:			19,536,684.07
In respect of purchase of lines at Streetsville:			
Amount assumed at date of purchase.....	\$6,000.00		
Less: Retired by the Commission.....	4,688.87		
		\$1,311.13	
Interest accrued thereon.....	32.78		
			1,343.91
In respect of purchase of original Muskoka Power Development:			
Amount assumed at date of purchase.....	\$50,595.93		
Less: Retired by the Commission.....	28,736.17		
		\$21,859.76	
Interest accrued thereon.....	828.55		
			22,688.31
In respect of purchase of sundry rural lines:			
Amount assumed at dates of purchase.....	\$69,289.85		
Less: Retired by the Commission.....	25,535.73		
		\$43,754.12	
Interest accrued thereon.....	932.77		
			44,686.89
Carried forward.....			68,719.11
			\$245,798,275.93

**HYDRO-ELECTRIC POWER**  
**Detailed Statement of Assets**  
**POWER UNDER**

ASSETS

Brought forward .....		\$267,791,393.66	
Insurance Funds:			
(a) Invested in securities of the Dominion of Canada, par value, \$850,000.00.....		\$859,581.49	
(b) Invested in securities of the Province of Ontario, par value, \$28,000.00.....		28,840.51	
Interest accrued thereon.....		1,443.74	889,865.74
Staff Pension Funds:			
Invested in securities of the Province of Ontario, par value, \$2,465,000.00.....		\$2,424,180.12	
Interest accrued thereon.....		27,758.72	2,451,938.84
Reserve Funds:			
(a) Invested in securities of the Dominion of Canada, par value, \$3,251,850.00.....		\$3,251,541.92	
(b) Invested in securities of the Canadian National Railway, guaranteed by the Dominion of Canada, par value, \$950,000.00.....		966,384.45	
(c) Invested in securities of the Province of Ontario, par value, \$27,618,500.00.....		27,295,589.11	
(d) Invested in securities of the Commission, guaranteed by the Province of Ontario, par value, \$1,200,000.00..		1,186,510.31	
(e) Invested in securities of the Temiskaming and Northern Ontario Railway, guaranteed by the Province of Ontario, par value, \$240,000.00.....		205,987.85	
(f) Invested in debentures of Ontario municipalities, which debentures were received from certain municipalities upon the sale thereto of their local distribution systems, par value, \$1,219,734.24.....		993,633.99	
Interest accrued thereon.....		409,023.84	34,308,671.47
Securities taken over by the Commission upon the transfer to it of the assets of Galetta Electric Power & Milling Company, Limited (par value \$36,500.00) at the cost thereof.....			
		\$18,560.00	
Interest accrued thereon.....		673.36	19,233.36
Cash:			
In banks.....		\$443,661.35	
In banks to pay bond interest due November 1, 1931, and interest coupons overdue but not presented.....		204,894.23	
Sinking funds on deposit with trustees for bondholders.....		521.23	
In hands of employees as advances on account of expenses..		101,199.82	
		\$750,276.63	
Less Funds of Hydro Radial Railways shown elsewhere in this balance sheet.....		33,136.83	717,139.80
Carried forward.....			\$306,178,242.87

**COMMISSION OF ONTARIO**  
**and Liabilities, October 30, 1931**

*TAKINGS—Continued*

		LIABILITIES	
Brought forward.....			\$245,798,275.93
Outstanding share capital of the Electrical Development Com- pany of Ontario, Limited.....		\$600.00	
Galletta Electric Power and Milling Company, Limited.....		580.00	
			1,180.00
Accounts payable.....		\$1,209,483.44	
Interest coupons due but not presented for payment.....		24,754.32	
			1,234,237.76
Hydro-Electric Power Commission, Hamilton Office Current Account (See balance sheet on page 161).....			541,387.71
Insurance Department:			
Outstanding claims and awards.....		\$809,729.71	
Surplus.....		115,261.85	
			924,991.56
Reserve for Staff Pensions.....			2,513,803.20
Balances due to municipalities in respect of amounts paid by them to October 31, 1931, in excess of the cost of power supplied to them as provided to be paid under the Power Commission Act:			
Niagara system.....		\$1,371,226.81	
Thunder Bay system.....		546.08	
Georgian Bay system.....		35,724.47	
Eastern Ontario system.....		132,491.81	
			1,539,989.17
Reserves for Sinking Fund:			
Niagara system.....		\$19,068,293.89	
Niagara rural lines.....		11,780.27	
Thunder Bay system.....		721,533.64	
Georgian Bay system.....		701,427.54	
Georgian Bay rural lines.....		687.23	
Eastern Ontario system.....		659,715.86	
		\$21,163,438.43	
Service building and equipment.....		100,693.86	
Office buildings.....		130,840.59	
			21,394,972.88
Reserves for Renewals:			
Niagara system.....		\$14,787,015.89	
Niagara rural lines.....		4,396.36	
Thunder Bay system.....		955,143.80	
Georgian Bay system.....		1,151,574.58	
Georgian Bay rural lines.....		372.23	
Eastern Ontario system.....		2,950,570.04	
Sudbury district.....		26,874.94	
Patricia District.....		5,674.60	
		\$19,881,622.44	
Service building and equipment.....		283,328.16	
Office buildings.....		101,874.49	
			20,266,825.09
Reserves for Obsolescence and Contingencies:			
Niagara system.....		\$14,629,578.26	
Niagara rural lines.....		2,147.62	
Thunder Bay system.....		920,639.40	
Georgian Bay system.....		343,311.87	
Georgian Bay rural lines.....		152.64	
Eastern Ontario system.....		1,254,868.33	
Sudbury district.....		54,392.24	
			17,205,090.36
Balance at credit of interest account.....			20,523.70
Contingent liabilities:			
In respect of contracts entered into for power undertakings in course of construction..		\$2,668,465.85	
Carried forward.....			\$311,441,277.36



HYDRO-ELECTRIC POWER

Detailed Statement of Assets

POWER UNDER

ASSETS

Brought forward .....		\$306,178,242.87	
Accounts receivable:			
Due by municipalities and sundry customers in respect of construction work, supply sales, etc.....	\$465,367.79		
Less Reserve for doubtful accounts.....	15,631.31		
		\$449,736.48	
Due by municipalities and sundry customers in respect of power accounts.....	\$3,664,853.37		
Less Reserve for doubtful accounts.....	397,451.94		
		3,267,401.43	
Sinking fund and interest accounts owing in respect of rural lines.....		4,104.82	
Claim against Dominion Government in respect of income taxes paid for the thirteen months ending December 31, 1921.....		72,334.46	
			3,793,577.19
Balances due by municipalities in respect of the costs of power supplied to them, as provided to be paid under the Power Commission Act:			
Niagara System.....		\$92,879.58	
Georgian Bay System.....		97,438.78	
Eastern Ontario System.....		55,137.96	
Thunder Bay System.....		43,488.95	
			288,945.27
Rural Loans:			
Total loans granted.....		\$23,542.00	
Instalments of principal received.....		445.99	
		\$23,096.01	
Interest instalments due.....		165.98	
			23,261.99
Work in progress:			
Expenditure on account of various systems chargeable upon completion to—			
Capital construction.....		\$4,677.32	
Operating and maintenance expenses.....		40,930.33	
			45,607.65
Insurance unexpired.....			25,671.51
Discount on debentures issued by the Commission, less amounts written off:			
On debenture issue of \$3,200,000 maturing 1941.....		\$83,298.81	
On debenture issue of \$4,000,000 maturing 1939.....		54,691.20	
			137,990.01
Total Power Undertakings.....			\$310,493,296.49

COMMISSION OF ONTARIO  
and Liabilities, October 31, 1931

*TAKINGS—Continued*

LIABILITIES

Brought forward.....\$311,441,277.36

Total Power Undertakings.....\$311,441,277.36

**HYDRO-ELECTRIC POWER**  
**Detailed Statement of Assets**  
*RADIAL RAILWAY*

ASSETS

Brought forward.....		\$310,493,296.49
Guelph Radial Railway:		
Road and equipment.....	\$444,070.06	
Materials and supplies.....	5,787.39	
Reserve funds:		
Invested in securities of the Province of Ontario (par value \$25,000.00).....	\$22,465.65	
Interest accrued thereon.....	474.59	
		22,940.24
Cash:		
In the general bank account of the Commission at Toronto.....	\$33,136.83	
In bank at Guelph.....	1,338.44	
In hands of employees as advances on account of expenses.....	1,500.00	
Accounts receivable.....	927.95	
		36,903.22
Insurance and expenses prepaid.....	1,169.92	
		<u>\$510,870.83</u>

Sandwich, Windsor & Amherstburg Railway Company:

Undertaking of the Sandwich, Windsor and Amherstburg Railway Company to repay the Hydro Radial debentures issued in purchase of, and for the extension and betterment of the Sandwich, Windsor and Amherstburg Railway—as per agreement covering the transfer at July 31, 1931, of the Railway by the Commission to the Company.....	\$5,816,205.00
Interest accrued on such debentures.....	61,839.63

NOTE.—The above-mentioned Hydro Radial debentures are: under Statute of 1930 and under Trust Deed dated July 31, 1931, in favour of the Guaranty Trust Company, as Trustee, secured by—

- (a) A charge upon the properties of the Railway.
- (b) Debentures of the eleven municipalities which own the Railway Company, to the aggregate amount of \$5,816,205.00.

\$5,878,044.63

Carried forward.....\$316,882,211.95



**COMMISSION OF ONTARIO**  
**and Liabilities, October 31, 1931**  
**UNDERTAKINGS**

**LIABILITIES**

Brought forward.....		\$311,441,277.36	
In respect of the Guelph Radial Railway:			
City of Guelph—Purchase price of the Railway payable thereto, in half yearly instalments according to purchase agreement.....	\$150,000.00		
Less: Twenty-one instalments thereon...	65,518.23		
		\$84,481.77	
Debentures issued by the Commission and guaranteed by the Province of Ontario:			
Five per cent debentures, due 1970, issued for the purpose of making extensions and betterments.....		300,000.00	
City of Guelph—Excess payment in respect of deficit.....		3,351.50	
Accounts payable and accrued charges.....	\$1,358.25		
Provision for unredeemed tickets.....	1,300.00		
		2,658.25	
Premium on sale of debentures—Less portion written off...		21,650.51	
Reserve—created by payment of instalments on the purchase price out of the revenue of the road and assessments against the City of Guelph.....		65,518.23	
Reserve for sinking fund.....		1,579.50	
Reserve for renewal of road and equipment.....		31,631.07	
			510,870.83
In respect of the Sandwich, Windsor and Amherstburg Railway Company:			
Debentures issued by the Commission in purchase of the Railway and for extensions and betterments thereto—guaranteed by the Province of Ontario:			
Four and one-half per cent debentures due April 1, 1960,	\$2,100,000.00		
Six per cent debentures, due July 1, 1961.....	900,000.00		
Five per cent debentures, due September 1, 1943.....	966,205.00		
Five per cent debentures, due July 1, 1945.....	750,000.00		
Five per cent debentures, due September 1, 1945.....	100,000.00		
Five per cent debentures, due July 15, 1946.....	1,000,000.00		
		\$5,816,205.00	
Interest accrued thereon.....	61,839.63		
			\$5,878,044.63
Carried forward.....			\$317,830,192.82

## HYDRO-ELECTRIC POWER

## Detailed Statement of Assets

## RADIAL RAILWAY

## ASSETS

Brought forward.....\$316,882,211.95

## Toronto and York Radial Railway:

City of Toronto—debentures held as collateral security for the repayment of the Hydro Radial debentures issued in purchase of the Toronto and York Radial Railway—as per agreement covering the transfer (in January, 1927) of the railway to the City of Toronto.....	\$2,375,000.00	
City of Toronto—interest accrued on \$2,375,000 debentures issued by the Commission in purchase of the Toronto and York Radial Railway.....	59,375.00	
	<hr/>	2,434,375.00

## Port Credit to St. Catharines Radial Railway:

Purchase of right-of-way and carrying charges (taxes, less rental revenue) down to October 31, 1931.....	\$72,885.06	
Construction materials purchased, less amount realized on sale thereof.....	117,510.09	
Surveying, engineering, administrative expenses and interest.....	343,748.39	
	<hr/>	534,143.54

## Toronto to Port Credit Radial Railway:

Purchase of right-of-way and carrying charges (taxes, less rental revenue) down to October 31, 1931—less amounts realized on properties sold.....	\$462,409.17	
Surveying, engineering, administrative expenses and interest.....	451,428.16	
	<hr/>	913,837.33
		<hr/>
		\$320,764,567.82
		<hr/>

LIABILITIES	
Brought forward.....	\$317,830,192.82
In respect of Toronto and York Radial Railway:	
Debentures issued by the Commission and guaranteed by the Province of Ontario:	
Six per cent. debentures, due 1940, issued in purchase of the Metropolitan, Scarboro and Mimico Radial Rail- way divisions.....	\$2,375,000.00
Interest accrued thereon.....	59,375.00
	<u>\$2,434,375.00</u>
In respect of the Port Credit to St. Catharines Radial Railway:	
Bank of Montreal—advances (secured by hypothecation of \$1,200,000 Hydro Radial debentures, being part of an issue of \$11,360,363 guaranteed by the Province of Ontario).....	500,000.00
	<u>\$320,764,567.82</u>



## HYDRO-ELECTRIC POWER

## Statement of Assets and Liabilities—as at 31st October, 1931—

## DOMINION POWER AND

## ASSETS

Properties, buildings, plants, lines, equipment, franchises, water-rights, contracts, etc., at the cost thereof to the Commission as at 1st January, 1930.....	\$21,000,000.00	
Net additions in the period 1st January, 1930, to 31st October, 1931.....	194,901.01	
	<u>\$21,194,901.01</u>	
Deduct:		
Sales of certain properties, plants and equipment.....	\$3,103,743.99	
Provisions for depreciation on buses, less charges thereagainst, in the period 1st January, 1930, to 31st October, 1931.....	70,660.21	
	<u>3,174,404.20</u>	
		\$18,020,496.81
Balances owing under agreements covering sales of certain properties, plants and equipment:		
By Canada Coach Lines Limited.....	\$600,000.00	
Accrued interest thereon.....	12,657.50	
	<u>612,657.50</u>	
By City of Hamilton.....	\$2,125,000.00	
Accrued interest thereon.....	53,125.00	
	<u>2,178,125.00</u>	
Shares (1,000) of First Preferred stock of Canada Coach Lines Limited—at par.....		100,000.00
Current assets:		
Cash in banks and on hand.....	\$196,363.78	
Cash in hands of employees.....	11,219.36	
Accounts receivable.....	258,445.52	
Materials and stores.....	151,511.03	
Insurance deposits and prepayments.....	25,991.14	
Power and light revenue accrued.....	12,213.92	
	<u>655,744.75</u>	
Hydro-Electric Power Commission—Toronto Office:		
Current account.....	\$881,482.71	
Less: Accrued interest on Commission's Bonds charged by Commission.....	340,095.00	
	<u>541,387.71</u>	
		<u>\$22,108,411.77</u>

## COMMISSION OF ONTARIO

of Undertakings and Companies Acquired 1st January, 1930, from  
TRANSMISSION COMPANY, LIMITED

## LIABILITIES

## Hydro-Electric Power Commission of Ontario:

Bonds issued by the Commission, and guaranteed by the  
Province, in purchase of the undertakings and Com-  
panies..... \$21,000,000.00

Cash paid by the Commission in purchase of inventories,  
accounts receivable and cash working funds..... 489,434.83  
\$21,489,434.83

## Current liabilities:

Accounts payable..... \$459,325.69  
Dominion Power Company—on adjustments..... 6,141.66  
Customers' deposits..... 1,778.72  
Realty and business taxes payable and accrued..... 28,125.32

Pensions awarded (Approximate actuarial lia-  
bility)..... \$56,722.38  
Less: Deposits thereagainst..... 53,625.88

3,096.50  
Provision for accident claims..... 10,828.00  
Provision for outstanding tickets..... 7,200.00  
Reserve against accounts receivable..... 40,407.40  
Reserve for contingencies..... 10,000.00

566,903.29

Surplus—For period 1st January, 1930, to 31st October, 1931,  
after making provision for interest on the bonds of the Com-  
mission issued in purchase of the undertakings and companies,  
but before provision for depreciation on plants and equipment  
other than on the buses..... 52,073.65

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\$22,108,411.77

## HYDRO-ELECTRIC POWER

## Statement of Revenue and Expenditure for the year ending 31st October,

## DOMINION POWER AND

## EXPENDITURE

Of power and light plants and utilities—		
Cost of operating and maintaining generating plants, transmission lines, stations and distribution systems.....	\$434,240.62	
Water rentals.....	175,269.44	
Power purchased.....	162,581.65	
Taxes—realty and business.....	86,615.32	
Commercial expenses.....	39,528.44	
General administrative expenses—proportion.....	110,900.79	
Bad debts written off.....	783.62	
		\$1,009,919.88
Of Hamilton Street Railway, Radial Railways and Bus Lines—		
Cost of operating and maintaining buildings, rights-of-way, rolling stock, buses and other equipment.....	\$1,010,801.76	
Electric power (including power purchased from the City of Hamilton).....	180,999.60	
Depreciation on buses.....	99,941.39	
Taxes—realty and business.....	106,675.10	
General and administrative expenses—proportion.....	143,541.04	
Bad debts written off.....	142.65	
		1,542,101.54
Of Hamilton Terminal Building—		
Wages, heating, power, light and sundry expenses.....	\$14,748.80	
Taxes—realty and business.....	13,269.19	
General and administrative expenses—proportion.....	1,956.86	
		29,974.85
		\$2,581,996.27
Interest on the bonds issued by the Commission, and guaranteed by the Province of Ontario, in purchase of the undertakings and companies.....		1,017,500.00
		\$3,599,496.27
Excess of revenue over expenditure of bus company sold 29th May, 1931.....		8,502.37
Surplus for the year ending 31st October, 1931, before provision for depreciation on plants and equipment, other than on the buses.....		10,417.21
		\$3,618,415.85
Surplus for the whole period 1st January, 1930 to 31st October, 1931, after making provision for interest on the bonds of the Commission issued in purchase of the undertakings and companies, but before provision for depreciation on plants and equipment other than on the buses—as shown on Statement of Assets and Liabilities.....		\$52,073.65
		\$52,073.65



## COMMISSION OF ONTARIO

1931—of Undertakings and Companies Acquired 1st January, 1930, from

## TRANSMISSION COMPANY, LIMITED

## REVENUE

From power and light plants and utilities—		
Power and light sold to customers.....	\$1,627,535.99	
Power supplied to Hamilton Street Railway and the radial railways.....	116,789.45	
Power and light supplied to the buildings, shops and services of the associated companies—approximately.....	7,500.00	\$1,751,825.44
From Hamilton Street Railway, Radial Railways and Bus Lines—		
Passenger, freight and miscellaneous.....		1,736,988.10
From Hamilton Terminal Building—		
Rentals (including those charged the Commission and associated companies).....		47,693.97
Interest (including interest receivable under sale agreements).....		81,908.34
		<u>\$3,618,415.85</u>
Surplus (after adjustments) for the period 1st January to 31st October, 1930, before provision for depreciation on plants and equipment other than the buses.....		\$41,656.44
Surplus for the year ending 31st October, 1931, before provision for depreciation on plants and equipment other than the buses.....		10,417.21
		<u>\$52,073.65</u>

## HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

Undertakings and Companies Acquired 1st January, 1930, from Dominion Power Transmission Company, Limited, under provisions of Purchase Agreement dated 2nd April, 1930, and Supplemental Agreement dated 14th August, 1930

All the outstanding shares of the following companies:

- Hamilton Cataract Power, Light and Traction Company, Limited, which Company in turn owns all the outstanding shares of the companies following:
  - Hamilton Electric Light and Power Company, Limited.
  - Hamilton Street Railway Company.
  - Hamilton and Dundas Street Railway Company (not operating).
  - Hamilton Radial Electric Railway Company (not operating).
  - Dundas Electric Company, Limited.
  - Lincoln Electric Light and Power Company, Limited.
  - Hamilton Electric Light and Cataract Power Company (not operating).
- Hamilton, Grimsby and Beamsville Electric Railway Company (ceased operating 30th June, 1931).
- Brantford and Hamilton Electric Railway Company (ceased operating 30th June, 1931).
- Hamilton Terminal Company, Limited.
- Western Counties Electric Company, Limited.
- Highway King Buses, Limited (sold 29th May, 1931).
- Brantford Electric and Operating Company, Limited (not operating).

Steam generating plant located at Hamilton.

Certain real estate and rights-of-way.

## NIAGARA

## Operating Account for the

COSTS OF OPERATION AS PROVIDED FOR UNDER THE TERMS OF THE  
POWER COMMISSION ACT

Power purchased.....		\$3,979,524.00
Costs of operation and maintenance, including the proportion of administrative expenses chargeable to the operation of this system:		
Generation and transmission equipment.....	\$4,152,624.00	
Rural power districts.....	460,488.04	
		4,613,112.04
Interest on capital investment in:		
Generation and transmission equipment.....	\$8,403,009.33	
Rural power districts.....	232,017.53	
		8,635,026.86
Provision for renewals of:		
Generation and transmission equipment.....	\$1,182,306.01	
Rural power districts.....	208,799.24	
		1,391,105.25
Provision for obsolescence and contingencies in respect of:		
Generation and transmission equipment.....	\$513,420.67	
Rural power districts.....	104,399.62	
		617,820.29
Provision for sinking funds for repayment of the cash advances by the Province of Ontario to the Commission and for the retirement of the bonds issued by and assumed by the Commission:		
By charges included in the cost of power delivered to muni- cipalities and rural power districts.....	\$1,327,279.39	
By charges against contracts with private companies which purchase power.....	489,950.94	
By charges included in the cost of distribution of power within rural power districts.....	55,496.81	
		1,872,727.14
		<u>\$21,109,315.58</u>

## SYSTEM

Year Ending October 31, 1931

## REVENUE FOR PERIOD

Collected from municipalities. ....	\$14,925,527.48	
Power sold to private companies. ....	4,934,718.20	
Power supplied at cost to Sandwich, Windsor and Amherstburg Railway Company and Windsor, Essex and Lake Shore Radial Railway Association. ....	121,922.84	
Collected from customers in rural power districts. ....	1,888,536.58	
		<u>\$21,870,705.10</u>
Add:		
Amounts due by certain municipalities, being the difference between the sums paid and the cost of power supplied to them in the year. ....	\$47,508.16	
Amounts due by municipalities comprising certain rural power districts, being the difference between the revenue col- lected from customers therein and the cost of power supplied them in the year. ....	27,335.42	
		<u>74,843.58</u>
		<u>\$21,945,548.68</u>
Deduct:		
Amounts collected from certain municipalities in excess of the sums required to be paid by them for power supplied in the year. ....	\$694,921.68	
Amounts collected from customers in certain rural power districts in excess of the cost of power delivered thereto...	141,311.42	
		<u>836,233.10</u>
Revenue. ....		<u><u>\$21,109,315.58</u></u>



## NIAGARA

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such upon ascertainment (by annual adjustment) of the actual

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system on which interest and fixed charges are payable	Average horse- power supplied in year after correction for power factor	Cost of power pur- chased	Share of operating	
	To Jan. 1 1931	To Oct. 31 1931				Operating, main- tenance and adminis- trative expenses	Interest
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
Acton .....		33.00	204,876.65	760.7	3,601.37	5,866.70	9,600.33
Agincourt .....	42.00	40.00	44,145.31	138.2	654.28	1,314.12	2,047.69
Ailsa Craig .....		48.00	41,812.72	120.0	568.11	1,832.41	1,917.01
Alvinston .....		90.00	62,977.72	87.0	411.88	2,278.71	2,815.46
Amherstburg .....		40.00	177,166.28	634.6	3,004.38	6,882.66	8,270.72
Ancaster twp. ....		30.00	54,765.57	263.3	1,118.71	1,813.93	2,585.70
Arkona .....		75.00	31,003.01	55.2	261.33	1,481.08	1,402.96
Aylmer .....	36.00	35.00	125,870.32	464.3	2,198.13	4,594.97	5,862.48
Ayr .....		35.00	50,325.22	200.0	946.86	1,629.63	2,369.11
Baden .....		32.00	68,720.87	273.8	1,296.25	2,192.77	3,202.99
Barton twp. ....		30.00	2,528.70	12.5	59.18	370.89	112.89
Beachville .....		33.00	75,050.70	296.9	1,405.61	2,502.98	3,333.28
Belle River .....		38.00	37,437.36	138.7	656.65	1,736.13	1,754.83
Blenheim .....		39.00	105,977.59	367.4	1,739.38	4,489.19	4,917.02
Blyth .....	60.00	58.00	37,616.37	85.3	403.83	1,641.14	1,718.74
Bolton .....		44.00	38,941.30	118.7	561.96	1,891.34	1,809.44
Bothwell .....		44.00	32,453.82	99.6	471.53	1,652.08	1,476.48
Brampton .....		29.00	435,119.11	1,941.0	9,189.25	13,630.06	20,587.64
Brantford .....		27.00	2,009,229.14	9,228.3	43,689.41	48,840.33	95,125.80
Brantford twp. ....		27.00	120,238.20	549.9	2,603.38	4,429.74	5,748.01
Bridgeport .....	32.00	34.00	24,151.36	107.4	508.46	1,362.87	1,152.69
Brigden .....	72.00	70.00	37,883.10	76.5	362.17	1,602.34	1,709.81
Brussels .....		52.00	51,627.10	128.4	607.88	2,313.13	2,368.06
Burford .....	38.00	35.00	37,680.18	145.7	689.79	1,222.66	1,722.11
Burgessville .....		43.00	18,588.55	56.1	265.59	889.28	829.85
Caledonia .....		29.00	68,938.45	294.4	1,393.77	2,059.55	3,252.35
Campbellville .....		60.00	7,287.85	25.0	118.36	830.53	341.15
Cayuga .....	55.00	50.00	29,557.46	86.5	409.52	1,288.34	1,362.29
Chatham .....		30.00	956,891.21	4,035.6	19,105.68	26,332.58	44,907.70
Chippawa .....		25.00	45,202.37	249.7	1,182.15	1,421.93	2,183.20
Clifford .....		56.00	27,654.88	60.2	285.00	1,393.75	1,262.54
Clinton .....		38.00	126,279.56	434.4	2,056.57	4,407.17	5,872.58
Comber .....		45.00	45,220.63	124.0	587.05	2,214.56	2,057.26
Cottam .....	45.00	44.00	21,731.34	67.8	320.98	822.36	1,001.24
Courtright .....	75.00	72.00	21,969.36	41.5	196.47	886.72	993.97
Dashwood .....		50.00	26,135.20	66.5	314.83	1,056.27	1,189.75
Delaware .....		36.00	8,911.88	36.0	170.43	499.11	418.26
Dorchester .....		38.00	20,365.18	74.6	353.18	843.17	945.80
Drayton .....		55.00	40,924.52	90.6	428.93	2,133.81	1,860.02
Dresden .....		45.00	95,297.76	295.2	1,397.56	4,166.93	4,392.29

## SYSTEM

## N.—COST OF POWER

the Power Commission Act—of Power supplied to it by the Commission; the amount cost; and the amount remaining to be credited or charged to each Municipality cost of power supplied to it in the year ending October 31, 1931

costs and fixed charges			Cost in excess of revenue from power sold to private companies	Total cost of power for year as provided to be paid under Power Commission Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment	
Renewals	Obsolescence and contingencies	Sinking fund				Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,807.44	671.63	2,131.67	837.70	24,516.84	25,102.26	585.42	.....
400.55	128.05	458.37	152.19	5,155.25	5,569.53	414.28	.....
427.18	129.45	436.91	132.15	5,443.22	5,758.80	315.58	.....
793.60	189.38	659.71	95.81	7,244.55	7,826.25	581.70	.....
1,545.19	575.59	1,839.34	698.83	22,816.71	25,381.95	2,565.24	.....
425.53	171.94	564.79	260.22	6,940.82	7,090.00	149.18	.....
368.12	93.77	323.52	60.79	3,991.57	4,142.47	150.90	.....
1,101.96	395.34	1,303.79	511.30	15,967.97	16,340.33	372.36	.....
420.95	159.51	522.71	220.24	6,269.01	7,001.41	732.40	.....
573.77	220.51	714.91	301.51	8,502.71	8,760.11	257.40	.....
17.04	7.62	26.04	13.77	607.43	376.00	.....	231.43
578.31	232.97	744.14	326.95	9,124.24	9,797.65	673.41	.....
318.57	121.42	388.56	152.74	5,128.90	5,269.60	140.70	.....
958.58	348.80	1,101.59	401.59	13,959.15	14,328.51	369.36	.....
420.14	116.16	393.30	93.93	4,787.24	4,976.09	188.85	.....
393.09	118.63	412.86	130.71	5,318.03	5,223.14	.....	94.89
317.29	108.41	338.95	109.68	4,474.42	4,380.16	.....	94.26
3,273.06	1,298.71	4,512.63	2,137.46	54,628.81	61,248.93	6,620.12	.....
14,730.11	6,201.70	20,823.98	10,162.36	239,573.69	249,164.06	9,590.37	.....
885.41	372.11	1,246.26	605.56	15,890.47	14,847.94	.....	1,012.53
181.40	77.15	249.79	118.27	3,650.63	3,622.22	.....	28.41
435.41	121.64	395.88	84.24	4,711.49	5,381.02	669.53	.....
557.49	161.92	539.42	141.40	6,689.30	6,678.93	.....	10.37
307.94	122.54	381.69	160.45	4,607.18	5,172.41	565.23	.....
175.39	54.80	187.02	61.78	2,463.71	2,411.20	.....	52.51
544.31	217.78	713.59	324.20	8,505.55	8,537.80	32.25	.....
67.40	23.47	75.84	27.53	1,484.28	1,499.50	15.22	.....
299.27	90.24	307.49	95.26	3,852.41	4,403.63	551.22	.....
7,421.57	3,062.07	9,918.52	4,444.07	115,192.19	121,279.84	6,087.65	.....
278.75	127.02	467.34	274.97	5,935.36	6,241.83	306.47	.....
313.23	84.75	289.30	66.29	3,694.86	3,373.51	.....	321.35
1,163.80	385.31	1,317.93	478.37	15,681.73	16,028.04	346.31	.....
465.13	143.49	471.21	136.55	6,075.25	5,578.83	.....	496.42
203.38	68.79	223.39	74.66	2,714.80	2,994.48	279.68	.....
257.53	65.20	229.73	45.70	2,675.32	3,010.62	335.30	.....
279.51	81.40	272.16	73.23	3,267.15	3,325.37	58.22	.....
72.84	28.19	92.25	39.64	1,320.72	1,296.90	.....	23.82
178.86	66.14	210.75	82.15	2,680.05	2,836.33	156.28	.....
460.44	123.12	427.70	99.77	5,533.79	4,981.12	.....	552.67
921.63	308.00	991.41	325.07	12,502.89	13,285.19	782.30	.....

## NIAGARA

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such upon ascertainment (by annual adjustment) of the actual

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Cost of power purchased	Share of operating	
	To Jan. 1 1931	To Oct. 31 1931				Operating, main-tenance and adminis-trative expenses	Interest
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
Drumbo . . . . .		45.00	18,732.97	61.6	291.63	867.68	864.42
Dublin . . . . .	50.00	58.00	18,220.19	43.8	207.36	850.28	830.04
Dundas . . . . .		25.00	312,298.15	1,489.3	7,050.77	7,298.45	14,713.18
Dunnville . . . . .		35.00	183,755.28	715.5	3,387.38	6,066.87	8,635.54
Dutton . . . . .		38.00	52,614.15	205.9	974.79	2,520.68	2,460.06
East Windsor . . . . .	32.00	31.00	762,505.98	3,071.1	14,539.46	22,709.55	35,838.82
Elmira . . . . .		31.00	199,623.46	742.7	3,516.15	5,862.61	9,259.76
Elora . . . . .		35.00	113,710.51	410.4	1,942.95	3,763.41	5,290.23
Embro . . . . .	55.00	52.00	28,261.32	84.0	397.68	1,164.48	1,250.12
Erieau . . . . .		56.00	27,499.83	66.3	313.88	1,367.03	1,261.87
Erie Beach . . . . .		70.00	6,945.10	15.2	71.96	397.75	317.13
Essex . . . . .		35.00	101,257.16	375.3	1,776.78	3,191.52	4,676.96
Etobicoke twp. . . . .		29.00	588,832.95	2,656.9	12,578.52	15,650.80	28,050.28
Exeter . . . . .		38.00	118,422.52	410.5	1,943.42	4,225.00	5,484.91
Fergus . . . . .		35.00	191,890.91	671.9	3,180.97	6,011.16	8,925.16
Fonthill . . . . .	35.00	34.00	26,916.80	119.6	566.22	1,428.51	1,287.39
Forest . . . . .		48.00	103,621.90	299.7	1,418.87	4,476.29	4,770.09
Galt . . . . .	27.00	26.00	1,338,799.77	6,219.7	29,445.83	33,541.51	63,379.86
Georgetown . . . . .		35.00	287,650.66	978.3	4,631.55	8,440.48	13,344.12
Glencoe . . . . .		58.00	71,598.28	163.8	775.48	3,239.31	3,269.18
Goderich . . . . .		42.00	330,705.25	1,001.2	4,739.97	11,535.10	15,233.54
Granton . . . . .		48.00	21,754.12	60.1	284.53	1,045.83	990.06
Guelph . . . . .		27.00	1,656,809.32	7,610.0	36,027.91	41,787.88	78,578.78
Hagersville . . . . .		31.00	223,340.31	896.3	4,243.34	5,885.37	10,439.66
Hamilton . . . . .		23.50	12,037,077.51	59,480.0	281,595.29	245,236.70	574,497.83
Harriston . . . . .		42.00	98,845.35	307.8	1,457.21	5,152.92	4,567.16
Harrow . . . . .	40.00	38.00	98,045.13	342.3	1,620.55	4,021.13	4,600.41
Hensall . . . . .		50.00	56,591.77	144.9	686.00	2,081.50	2,567.78
Hespeler . . . . .		29.00	350,556.09	1,582.4	7,491.53	9,300.90	16,674.91
Highgate . . . . .		44.00	24,747.71	73.5	347.97	1,179.40	1,132.28
Humberstone . . . . .		28.00	71,469.94	323.6	1,532.01	2,158.46	3,410.41
Ingersoll . . . . .		28.00	475,660.94	2,055.6	9,731.80	12,846.14	21,402.12
Jarvis . . . . .		38.00	53,649.08	174.9	828.03	1,533.48	2,489.90
Kingsville . . . . .	40.00	38.00	127,301.36	439.3	2,079.77	4,769.90	5,843.56
Kitchener . . . . .		27.00	3,366,309.77	15,729.6	74,468.41	75,194.16	159,954.72
Lambeth . . . . .		42.00	27,960.02	98.6	466.80	1,256.46	1,311.84
La Salle . . . . .	38.00	36.00	65,012.02	240.5	1,138.60	2,125.22	3,056.43
Leamington . . . . .	38.00	37.00	292,436.65	1,015.3	4,806.72	11,453.07	13,719.63
Listowel . . . . .		36.00	227,390.14	832.0	3,938.93	9,049.88	10,625.01
London . . . . .		26.00	5,831,689.56	27,645.3	130,880.74	132,348.59	275,667.54



## SYSTEM

## N.—COST OF POWER

the Power Commission Act—of Power supplied to it by the Commission; the amount cost; and the amount remaining to be credited or charged to each Municipality cost of power supplied to it in the year ending October 31, 1931

costs and fixed charges			Cost in excess of revenue from power sold to private companies	Total cost of power for year as provided to be paid under Power Commission Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment	
Renewals	Obsolescence and contingencies	Sinking fund				Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
177.10	60.08	194.31	67.83	2,523.05	2,769.73	246.68	.....
199.31	65.07	190.43	48.23	2,390.72	2,476.07	85.35	.....
2,194.76	935.48	3,217.65	1,640.04	37,050.33	37,911.30	860.97	.....
1,611.94	487.71	1,910.19	787.92	22,887.55	25,043.34	2,155.79	.....
442.71	168.64	545.91	226.74	7,339.53	7,824.80	485.27	.....
6,049.44	2,467.08	7,898.55	3,381.95	92,884.85	95,764.68	2,879.83	.....
1,742.61	641.81	2,070.02	817.87	23,910.83	23,024.68	.....	886.15
1,020.29	365.19	1,181.75	451.94	14,015.76	14,364.70	348.94	.....
267.83	85.85	283.70	92.50	3,542.16	4,413.33	871.17	.....
298.63	85.02	286.99	73.01	3,686.43	3,713.68	27.25	.....
78.07	21.44	72.55	16.74	975.64	1,062.21	86.57	.....
840.29	326.76	1,036.15	413.29	12,261.75	13,134.61	872.86	.....
4,330.45	1,828.17	6,104.48	2,925.82	71,468.52	77,049.08	5,580.56	.....
1,081.79	362.43	1,228.20	452.05	14,777.80	15,599.58	821.78	.....
1,744.96	620.97	1,987.08	739.91	23,210.21	23,516.47	306.26	.....
212.45	73.79	279.30	131.71	3,979.37	4,091.25	111.88	.....
1,032.93	337.86	1,078.59	330.03	13,444.66	14,384.40	939.74	.....
9,676.45	4,129.00	13,865.36	6,849.24	160,887.25	170,231.98	9,344.73	.....
2,681.59	910.70	2,992.13	1,077.32	34,077.89	34,240.99	163.10	.....
795.08	226.33	749.25	180.38	9,235.01	9,502.79	267.78	.....
3,274.54	984.21	3,453.31	1,102.54	40,323.21	40,822.59	499.38	.....
224.08	64.48	225.94	66.18	2,901.10	2,886.78	.....	14.32
12,194.79	5,244.83	17,192.57	8,380.26	199,407.02	205,469.30	6,062.28	.....
1,857.21	703.56	2,312.98	987.02	26,429.14	27,784.05	1,354.91	.....
81,159.45	36,261.43	123,947.57	65,500.41	1,408,198.68	1,394,027.92	.....	14,170.76
963.25	317.32	1,031.15	338.95	13,827.96	12,926.02	.....	901.94
874.68	320.95	1,021.05	376.95	12,835.72	13,118.64	282.92	.....
596.91	165.47	584.49	159.57	6,841.72	7,244.11	402.39	.....
2,608.93	1,079.80	3,630.84	1,742.57	42,529.48	48,411.62	5,882.14	.....
244.97	79.12	257.73	80.94	3,322.41	3,233.25	.....	89.16
546.55	231.04	740.65	356.35	8,975.47	9,060.99	85.52	.....
3,347.42	1,376.08	4,691.24	2,263.66	55,658.46	57,555.97	1,897.51	.....
513.39	162.46	557.33	192.60	6,277.19	6,647.96	370.77	.....
1,113.29	414.62	1,303.90	483.76	16,008.80	16,857.89	849.09	.....
24,149.53	10,493.59	34,885.00	17,321.71	396,467.12	424,698.41	28,231.29	.....
257.41	87.62	293.29	108.58	3,782.00	4,139.10	357.10	.....
553.65	212.84	674.65	264.84	8,026.23	8,731.90	705.67	.....
2,628.03	939.04	3,052.17	1,118.07	37,716.73	37,738.83	22.10	.....
2,001.75	738.60	2,364.68	916.21	29,635.06	29,952.90	317.84	.....
40,549.37	17,813.84	60,035.43	30,443.48	687,738.99	718,778.06	31,039.07	.....

## NIAGARA

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such upon ascertainment (by annual adjustment) of the actual

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system on which interest and fixed charges are payable	Average horsepower supplied in year after correction for power factor	Cost of power purchased	Share of operating	
	To Jan. 1 1931	To Oct. 31 1931				Operating, maintenance and administrative expenses	Interest
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
London Ry. Com.	15.00	kw. hr.	331,163.46	1,272.7	6,025.32	11,673.12	15,384.83
London twp.	35.00	34.00	69,292.31	278.4	1,318.03	2,303.46	3,263.92
Long Branch		29.00	120,554.20	522.8	2,475.08	3,171.16	5,787.26
Lucan		37.00	43,288.34	165.6	784.00	1,736.69	2,000.22
Lynden		40.00	23,825.55	81.8	387.26	973.70	1,095.75
Markham	45.00	43.00	66,084.16	224.9	1,064.74	3,187.00	2,983.48
Merlin	47.00	45.00	43,508.03	125.3	593.21	1,790.00	2,001.08
Merritton		22.00	446,225.54	2,543.9	12,043.55	11,364.39	21,847.27
Milton		31.00	193,208.47	766.8	3,630.25	7,905.81	8,946.26
Milverton	33.00	34.00	91,952.47	340.1	1,610.13	2,956.47	4,246.06
Mimico		26.00	389,536.92	1,886.6	8,931.70	9,446.52	18,612.08
Mitchell	33.00	32.00	113,545.62	454.9	2,153.63	3,758.72	5,324.68
Moorefield		60.00	20,845.86	44.8	212.10	1,247.76	945.47
Mount Brydges		45.00	23,663.13	86.3	408.57	1,073.41	1,103.80
Newbury		52.00	15,798.72	40.1	189.84	738.11	724.90
New Hamburg		33.00	117,738.33	437.6	2,071.72	3,988.00	5,487.58
New Toronto		29.00	1,166,036.27	5,072.8	24,016.08	32,838.39	54,793.17
Niagara Falls		19.00	1,421,197.95	8,895.9	42,115.72	31,073.85	69,324.61
Niagara on Lake	28.00	27.00	83,817.84	452.8	2,143.68	3,451.09	4,049.10
Norwich		34.00	83,303.15	318.5	1,507.87	3,258.86	3,714.69
Oil Springs		42.00	56,947.12	166.8	789.68	2,438.32	2,598.27
Otterville		43.00	24,277.65	79.6	376.85	1,070.97	1,084.96
Palmerston		38.00	137,416.00	477.8	2,262.04	6,610.52	6,398.79
Paris		28.00	266,735.42	1,225.6	5,802.34	7,440.85	12,602.62
Parkhill		62.00	63,855.44	137.6	651.44	2,680.86	2,904.88
Petrolia		40.00	263,523.45	860.0	4,071.49	10,059.64	12,138.43
Plattsville	60.00	62.00	22,252.47	53.9	255.18	987.97	1,006.37
Point Edward		40.00	145,954.81	559.3	2,647.89	6,606.18	6,836.29
Port Colborne		28.00	311,322.67	1,409.6	6,673.45	9,616.42	14,820.04
Port Credit		32.00	120,148.40	499.9	2,366.67	4,529.72	5,679.51
Port Dalhousie	30.00	28.00	106,887.89	485.8	2,299.92	3,708.59	5,095.52
Port Dover	42.00	40.00	88,261.12	293.0	1,387.15	3,577.33	4,114.72
Port Rowan		80.00	35,778.99	70.0	331.40	1,369.33	1,629.73
Port Stanley		40.00	99,994.66	333.9	1,580.78	3,940.52	4,618.18
Preston		27.00	694,592.02	3,284.3	15,548.81	17,428.13	32,972.76
Princeton		55.00	37,751.89	109.1	516.51	1,684.84	1,742.09
Queenston		29.00	17,589.57	87.0	411.88	644.35	840.56
Richmond Hill		38.00	70,277.51	264.2	1,250.80	2,599.85	3,290.27
Ridgetown		38.00	112,430.90	394.6	1,868.15	4,722.43	5,218.70
Riverside		33.00	317,502.33	1,176.2	5,568.47	8,819.84	14,863.45

## SYSTEM

## N.—COST OF POWER

the Power Commission Act—of Power supplied to it by the Commission; the amount cost; and the amount remaining to be credited or charged to each Municipality cost of power supplied to it in the year ending October 31, 1931

costs and fixed charges			Cost in excess of revenue from power sold to private companies	Total cost of power for year as provided to be paid under Power Commission Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment	
Renewals	Obsolescence and contingencies	Sinking fund				Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
2,825.67	1,139.72	3,437.00	1,401.52	41,887.18	36,369.73	.....	5,517.45
565.62	216.40	714.99	306.58	8,689.00	9,526.82	837.82	.....
922.79	376.81	1,250.81	575.72	14,559.63	15,161.19	601.56	.....
367.65	136.03	447.20	182.37	5,654.16	6,125.93	471.77	.....
224.60	73.62	249.77	90.08	3,094.78	3,273.85	179.07	.....
490.95	182.75	632.97	247.66	8,789.55	9,743.13	953.58	.....
437.39	142.89	453.24	137.98	5,555.79	5,686.39	130.60	.....
2,571.05	1,202.46	4,610.63	2,801.39	56,440.74	55,966.23	.....	474.51
1,612.73	568.52	2,007.15	844.41	25,515.13	23,769.91	.....	1,745.22
803.28	303.81	956.10	374.52	11,250.37	11,503.97	253.60	.....
2,647.51	1,149.76	4,034.58	2,077.56	46,899.71	49,052.41	2,152.70	.....
934.70	355.85	1,180.75	500.94	14,209.27	14,631.96	422.69	.....
236.81	62.21	217.90	49.33	2,971.58	2,688.98	.....	282.60
209.12	74.57	245.34	95.04	3,209.85	3,882.72	672.87	.....
168.73	53.05	165.23	44.16	2,084.02	2,087.32	3.30	.....
1,038.89	375.67	1,228.17	481.89	14,671.92	14,442.13	.....	229.79
8,790.47	3,653.37	12,021.95	5,586.26	141,699.69	147,110.63	5,410.94	.....
7,015.40	3,654.78	14,602.89	9,796.32	177,583.57	169,021.92	.....	8,561.65
533.20	216.32	866.92	498.63	11,758.94	12,290.29	531.35	.....
662.26	248.18	827.68	350.74	10,570.28	10,827.26	256.98	.....
564.57	195.82	593.05	183.68	7,363.39	7,004.90	.....	358.49
217.39	72.37	243.27	87.66	3,153.47	3,421.32	267.85	.....
1,252.03	441.42	1,429.92	526.16	18,920.88	18,157.60	.....	763.28
1,952.38	825.41	2,762.87	1,349.65	32,736.12	34,401.96	1,665.84	.....
728.47	188.22	668.52	151.53	7,973.92	8,532.19	558.27	.....
2,455.16	882.11	2,737.82	947.04	33,291.69	35,344.05	2,052.36	.....
242.89	69.00	231.74	59.36	2,852.51	3,324.46	471.95	.....
1,218.11	481.41	1,514.76	615.91	19,920.55	22,372.30	2,451.75	.....
2,380.77	1,006.41	3,226.29	1,552.27	39,275.65	39,469.93	194.28	.....
964.23	388.44	1,247.34	550.50	15,726.41	15,996.49	270.08	.....
815.98	309.01	1,108.62	534.97	13,872.61	13,734.67	.....	137.94
835.85	276.42	919.62	322.66	11,433.75	11,820.14	386.39	.....
420.03	107.58	374.38	77.09	4,309.54	5,601.96	1,292.42	.....
938.01	316.55	1,039.78	367.70	12,801.52	13,357.64	556.12	.....
4,930.12	2,150.40	7,195.57	3,616.73	83,842.52	88,766.85	4,924.33	.....
382.29	119.73	392.30	120.14	4,957.90	5,998.17	1,040.27	.....
124.73	49.74	182.20	95.81	2,349.27	2,523.45	174.18	.....
550.92	212.10	725.46	290.94	8,920.34	10,040.20	1,119.86	.....
1,008.67	369.75	1,168.49	434.54	14,790.73	14,994.12	203.39	.....
2,692.73	1,046.15	3,288.92	1,295.25	37,574.81	38,815.68	1,240.87	.....



## NIAGARA

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such upon ascertainment (by annual adjustment) of the actual

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system on which interest and fixed charges are payable	Average horse- power supplied in year after correction for power factor	Cost of power pur- chased	Share of operating	
	To Jan. 1 1931	To Oct. 31 1931				Operating, main- tenance and admini- strative expenses	Interest
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
Rockwood.....		45.00	33,292.59	102.1	483.37	1,062.87	1,533.49
Rodney.....		45.00	48,479.86	129.2	611.67	2,250.32	1,844.03
St. Catharines.....		21.50	1,461,140.06	8,292.0	39,256.69	36,784.87	70,896.75
St. Clair Beach.....		38.00	23,306.87	78.7	372.59	741.51	1,082.38
St. George.....		40.00	39,815.66	130.0	643.86	1,714.97	1,848.74
St. Jacobs.....	33.00	32.00	48,490.42	195.0	923.19	1,614.69	2,284.33
St. Mary's.....		34.00	331,121.89	1,343.0	6,358.15	11,772.19	15,510.10
St. Thomas.....		28.00	1,149,826.29	5,362.4	25,387.13	32,664.82	54,444.39
Sandwich.....		30.00	870,836.08	3,348.6	15,853.23	23,600.67	40,872.65
Sarnia.....		34.00	1,771,325.59	6,672.7	31,590.47	47,031.96	82,752.49
Scarboro twp....	34.00	32.00	650,980.07	2,575.0	12,190.78	15,769.85	30,635.34
Seaforth.....	35.00	34.00	125,657.18	467.2	2,211.86	4,250.35	5,812.58
Simcoe.....		31.00	324,964.26	1,403.6	6,645.04	9,987.65	15,436.64
Springfield.....		46.00	29,225.55	77.0	364.54	1,158.14	1,333.67
Stamford twp....		21.00	271,797.28	1,711.1	8,100.84	6,851.26	13,376.93
Stouffville.....		47.00	56,675.84	162.0	766.95	2,319.27	2,545.57
Stratford.....		30.00	1,654,430.33	7,361.0	34,849.07	43,152.69	78,277.59
Strathroy.....		34.00	230,262.53	915.0	4,331.87	7,358.17	10,773.48
Sutton.....	55.00	60.00	66,789.97	157.7	746.59	3,876.66	2,730.57
Tavistock.....		34.00	122,519.93	464.9	2,200.97	4,342.12	5,737.55
Tecumseh.....		35.00	117,096.91	410.6	1,943.90	3,807.28	5,470.75
Thamesford.....		40.00	45,072.62	152.5	721.98	1,770.59	2,078.16
Thamesville.....		40.00	49,517.47	176.2	834.18	2,153.97	2,303.03
Thedford.....		68.00	29,679.90	59.5	281.69	1,697.35	1,342.46
Thorndale.....		62.00	20,515.49	44.6	211.15	1,328.45	920.60
Thorold.....		24.00	360,959.19	1,914.5	9,063.79	10,772.20	17,621.64
Tilbury.....		38.00	125,776.27	443.1	2,097.76	5,218.37	5,841.92
Tillsonburg.....		33.00	212,121.98	803.8	3,805.42	7,266.96	9,487.43
Toronto.....		26.10	54,790,933.48	251,822.4	1,192,199.09	1,069,575.34	2,597,442.49
Toronto twp....		32.00	334,062.47	1,391.4	6,587.28	11,669.03	15,824.21
Walkerville.....		28.00	1,927,557.24	8,242.6	39,022.82	42,925.76	90,900.88
Wallaceburg.....		35.00	464,616.11	1,587.5	7,515.68	14,990.16	21,492.53
Wardsville.....		65.00	13,911.17	32.0	151.50	617.48	636.43
Waterdown.....		31.00	58,945.20	237.0	1,122.03	2,347.11	2,704.25
Waterford.....		32.00	92,970.23	383.7	1,816.55	2,832.81	4,381.06
Waterloo.....		27.00	626,786.34	2,877.2	13,621.49	14,818.80	29,684.75
Watford.....		55.00	71,432.44	180.6	855.01	3,016.15	3,265.26
Welland.....		23.00	652,495.44	3,606.9	17,076.09	15,964.18	31,494.37
Wellesley.....		45.00	39,222.37	111.3	526.93	1,470.55	1,790.73
West Lorne.....		38.00	61,114.49	221.5	1,048.64	2,942.41	2,818.65

## SYSTEM

## N.—COST OF POWER

the Power Commission Act—of Power supplied to it by the Commission; the amount cost; and the amount remaining to be credited or charged to each Municipality cost of power supplied to it in the year ending October 31, 1931

costs and fixed charges			Cost in excess of revenue from power sold to private companies	Total cost of power for year as provided to be paid under Power Commission Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment	
Renewals	Obsolescence and contingencies	Sinking fund				Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
328.66	110.27	346.53	112.43	3,977.62	4,594.47	616.85	.....
379.58	123.64	414.01	142.28	5,765.53	5,812.48	46.95	.....
8,478.18	3,917.94	15,097.22	9,131.29	183,562.94	178,278.59	.....	5,284.35
211.10	75.68	241.78	86.67	2,811.71	2,991.19	179.48	.....
370.17	126.67	414.35	149.77	5,268.53	5,439.63	171.10	.....
400.76	156.48	503.64	214.74	6,097.83	6,278.97	181.14	.....
2,636.51	1,087.61	3,438.35	1,478.93	42,281.84	45,661.11	3,379.27	.....
8,223.20	3,574.64	11,896.33	5,905.17	142,095.68	150,146.87	8,051.19	.....
7,185.56	2,812.02	9,026.08	3,687.54	103,037.75	100,459.00	.....	2,578.75
14,966.65	5,797.34	18,376.45	7,348.09	207,863.45	226,870.85	19,007.40	.....
4,890.14	1,957.11	6,734.04	2,835.63	75,012.89	83,337.42	8,324.53	.....
1,095.59	387.80	1,307.87	514.49	15,580.54	15,963.82	383.28	.....
2,534.45	994.81	3,373.69	1,545.67	40,517.95	43,510.36	2,992.41	.....
308.03	88.12	304.16	84.79	3,641.45	3,540.44	.....	101.01
1,340.76	698.74	2,802.76	1,884.29	35,055.58	35,933.77	878.19	.....
521.37	160.86	573.69	178.40	7,066.11	7,615.52	549.41	.....
12,343.45	5,258.76	17,153.69	8,106.06	199,141.31	220,828.90	21,687.59	.....
1,911.14	685.90	2,386.51	1,007.61	28,454.68	31,109.68	2,655.00	.....
592.49	174.61	618.10	173.66	8,912.68	9,365.37	452.69	.....
1,052.94	400.29	1,275.29	511.96	15,521.12	15,807.98	286.86	.....
1,033.90	383.07	1,214.05	452.16	14,305.11	14,370.94	65.83	.....
417.23	141.15	467.05	167.94	5,764.10	6,101.31	337.21	.....
440.11	163.62	514.54	194.03	6,603.48	7,047.29	443.81	.....
341.69	91.45	310.05	65.52	4,130.21	4,043.12	.....	87.09
232.04	61.22	213.82	49.11	3,016.39	2,763.10	.....	253.29
2,348.30	1,045.42	3,760.07	2,108.28	46,719.70	45,948.36	.....	771.34
1,124.88	417.32	1,306.66	487.95	16,494.86	16,838.20	343.34	.....
1,699.69	604.27	2,108.72	885.16	25,857.65	26,525.04	667.39	.....
346,364.11	154,599.81	565,985.07	277,311.30	6,203,477.21	6,572,564.17	369,086.96	.....
2,668.43	1,067.98	3,468.09	1,532.23	42,817.25	44,523.97	1,706.72	.....
14,467.51	6,043.21	19,957.49	9,076.89	222,394.56	230,793.15	8,398.59	.....
4,242.84	1,502.50	4,830.71	1,748.18	56,322.60	55,564.12	.....	758.48
154.19	44.85	145.58	35.24	1,785.27	2,081.58	296.31	.....
473.01	180.10	598.91	260.99	7,686.40	7,347.54	.....	338.86
754.26	301.25	965.38	422.54	11,473.85	12,279.69	805.84	.....
4,582.84	1,948.73	6,497.22	3,168.42	74,322.25	77,683.69	3,361.44	.....
757.87	231.08	745.04	198.88	9,069.29	9,932.50	863.21	.....
4,018.46	1,767.92	6,746.01	3,971.98	81,039.01	82,957.99	1,918.98	.....
402.54	118.44	409.47	122.57	4,841.23	5,009.97	168.74	.....
543.95	193.94	634.80	243.92	8,426.31	8,416.73	.....	9.58

## NIAGARA

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such upon ascertainment (by annual adjustment) of the actual

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system on which interest and fixed charges are payable	Average horsepower supplied in year after correction for power factor	Cost of power purchased	Share of operating	
	To Jan. 1 1931	To Oct. 31 1931				Operating, maintenance and administrative expenses	Interest
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
Weston.....	28.00		579,102.64	2,736.3	12,954.42	14,588.95	27,521.79
Wheatley.....	51.00		56,756.16	137.7	651.91	2,375.96	2,412.97
Windsor.....	28.00		5,524,672.28	23,656.2	111,995.20	116,687.09	260,534.41
Woodbridge....	36.00	35.00	82,480.76	310.6	1,470.47	3,427.54	3,851.76
Woodstock.....		27.00	1,034,825.60	4,713.4	22,314.58	25,338.39	46,735.75
Wyoming.....		54.00	23,280.06	56.9	269.38	1,012.49	1,059.37
York East twp.	33.00	32.00	1,046,148.74	4,790.2	22,678.17	46,632.77	50,045.99
York North twp.		32.00	508,654.39	1,977.1	9,360.16	15,259.12	23,130.04
Zurich.....		62.00	42,084.22	89.1	421.82	1,719.92	1,901.66
North York Radial Railways..			117,582.21	509.5	2,412.12	3,044.96	5,773.69
Toronto Transportation Comm.			124,145.84	550.7	2,607.17	3,877.87	5,970.99
Sandwich, Windsor and Amherstburg Railway Company			765,143.51	3,205.5	15,175.75	17,594.96	36,225.98
Windsor, Essex and Lake Shore Railway Association.....			265,254.06	884.1	4,185.58	9,561.63	12,477.45
RURAL POWER DISTRICTS							
Acton R.P.D.—Erin, Esquesing and Nassagaweya twps.			2,262.34	8.4	39.77	70.45	107.04
Ailsa Craig R.P.D.—McGillivray, Williams E. and Lobo twps.			546.48	1.8	8.52	18.71	25.70
Alvinston R.P.D. — Brooke twp.			1,954.52	2.7	12.78	69.56	88.31
Amherstburg R.P.D. — Anderton, Malden, Colchester N., and Colchester S. twps..			150,253.26	514.9	2,437.68	5,578.72	6,808.95
Aylmer R.P.D.—Dorchester S., Malahide, Yarmouth, Bayham, Dorchester N., and Dereham twps.			67,278.09	239.4	1,133.39	2,265.54	3,137.26
Ayr R.P.D. — Dumfries N., Dumfries S. and Blenheim twps.			7,107.32	29.8	141.09	255.92	337.32
Baden R.P.D. — Blandford, Wilmot, Zorra E., Easthope S., Easthope N., Wellesley, Waterloo and Blenheim twps			63,995.70	252.5	1,195.40	1,976.11	3,021.72
Beamsville R.P.D.—Grimsby N., Grimsby S., Caistor, Gainsborough, Clinton, Pelham, Louth and Wainfleet twps.			205,414.86	805.4	5,591.66	7,545.38	9,679.72
Belle River R.P.D.—Maidstone and Rochester twps..			68,565.96	257.6	1,219.55	2,453.31	3,210.23
Blenheim R.P.D. — Raleigh and Harwich twps.			32,306.74	112.0	530.24	1,035.41	1,507.66



## SYSTEM

## N.—COST OF POWER

the Power Commission Act—of Power supplied to it by the Commission; the amount cost; and the amount remaining to be credited or charged to each Municipality cost of power supplied to it in the year ending October 31, 1931

costs and fixed charges			Cost in excess of revenue from power sold to private companies	Total cost of power for year as provided to be paid under Power Commission Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment	
Renewals	Obsolescence and contingencies	Sinking fund				Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
4,051.80	1,699.18	6,000.44	3,013.26	69,829.84	76,615.02	6,785.18	.....
545.72	160.73	546.84	151.64	6,845.77	6,612.76	.....	233.01
41,448.84	17,324.17	57,226.70	26,050.62	631,267.03	665,873.08	34,606.05	.....
709.80	266.27	856.52	342.04	10,924.40	10,913.92	.....	10.48
6,831.30	3,009.79	10,164.18	5,190.48	119,584.47	127,260.87	7,676.40	.....
250.40	74.02	242.89	62.66	2,971.21	3,072.15	100.94	.....
6,675.48	2,962.77	10,827.26	5,275.05	145,097.49	154,164.11	9,066.62	.....
3,624.31	1,479.45	5,056.08	2,177.22	60,086.38	63,267.42	3,181.04	.....
480.51	128.08	439.07	98.12	5,189.18	5,524.16	334.98	.....
851.52	354.94	1,250.97	561.07	14,249.27	16,811.83	2,562.56	.....
939.04	371.62	1,287.64	606.44	15,660.77	17,502.51	1,841.74	.....
5,862.73	2,408.71	7,927.29	3,529.95	88,725.37	88,725.37	.....	.....
2,436.37	801.22	2,761.63	973.59	33,197.47	33,197.47	.....	.....
19.96	7.41	23.54	9.25	277.42	277.42	see page	185
5.18	1.70	5.68	1.98	67.47	67.47	"	"
24.62	5.87	20.47	2.97	224.58	224.58	"	"
1,288.79	474.33	1,517.02	567.02	18,672.51	18,672.51	"	"
603.84	212.83	697.28	263.63	8,313.77	8,313.77	"	"
56.85	22.40	73.76	32.81	920.15	920.15	"	"
538.44	206.18	665.83	278.06	7,881.74	7,881.74	"	"
1,775.81	596.82	2,134.97	886.92	28,211.28	28,211.28	"	"
576.95	223.03	711.36	283.67	8,678.10	8,678.10	"	"
292.22	106.34	335.81	123.34	3,931.02	3,931.02	"	"

## NIAGARA

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such upon ascertainment (by annual adjustment) of the actual

Rural Power District	Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Cost of power purchased	Share of operating	
				Operating, maintenance and administrative expenses	Interest
	\$ c.		\$ c.	\$ c.	\$ c.
<b>Bond Lake</b> R.P.D.—King, Vaughan, Markham, Whitchurch and York N. twps. ....	206,852.90	662.2	3,135.05	5,622.25	8,280.19
<b>Bothwell</b> R.P.D.—Ekfrid, Zone, Orford, Aldborough and Mosa twps. ....	35,664.16	103.2	488.58	1,367.96	1,652.21
<b>Brampton</b> R.P.D.—Chinguacousy and Toronto twps. ....	26,082.70	113.6	537.81	1,254.28	1,241.73
<b>Brant</b> R.P.D.—Brantford, Burford, Blenheim, Dumfries S., Onondaga and Oakland twps. ....	91,587.59	405.6	1,920.23	3,798.13	4,361.99
<b>Brigden</b> R.P.D.—Moore and Sombra twps. ....	16,525.78	33.8	160.02	621.00	752.00
<b>Burford</b> R.P.D.—Burford, Brantford, Oakland, Townsend and Windham twps. ....	34,111.29	131.9	624.45	1,040.19	1,576.39
<b>Caledonia</b> R.P.D.—Ancaster, Seneca, Glanford, Onondaga, Binbrook, Caistor, Grimsby S. and Barton twps. ....	54,443.96	228.8	1,083.20	1,797.73	2,580.45
<b>Chatham</b> R.P.D.—Dover E., Chatham, Raleigh and Harwich twps. ....	91,112.15	378.8	1,793.35	2,522.44	4,301.62
<b>Chippawa</b> R.P.D.—Willoughby, Bertie and Crowland twps. ....	18,184.39	97.7	462.54	523.74	868.52
<b>Clinton</b> R.P.D.—Goderich, Stanley Tuckersmith, Hullett and Hay twps. .	33,504.81	104.5	494.73	1,361.36	1,566.66
<b>Delaware</b> R.P.D. — Delaware, Westminster, Caradoc, Ekfrid, Lobo and London twps. ....	64,784.37	261.7	1,238.96	1,994.87	3,045.96
<b>Dorchester</b> R.P.D.—London, Nissouri W., Nissouri E., Oxford N., Dorchester N., Dorchester S., Westminster and Yarmouth twps. ....	81,702.77	300.8	1,424.07	2,622.60	3,791.32
<b>Dresden</b> R.P.D.—Camden, Chatham Gore and Dawn twps. ....	8,569.92	26.6	125.93	311.69	400.44
<b>Drumbo</b> R.P.D.—Blenheim, Burford and Blandford twps. ....	24,084.52	66.2	313.41	1,014.70	1,100.08
<b>Dundas</b> R.P.D.—Flamboro W., Beverly, Glanford, Ancaster, Flamboro E. and Nelson twps. ....	95,494.23	437.6	2,368.96	2,295.75	4,530.48
<b>Dunnville</b> R.P.D.—Moulton and Dunn twps. ....	5,386.68	21.6	102.26	161.80	256.34
<b>Dutton</b> R.P.D.—Dunwich and Aldboro twps. ....	30,014.60	109.2	516.99	1,351.36	1,395.19
<b>Elmira</b> R.P.D.—Woolwich, Peel and Pilkington twps. ....	10,801.50	39.1	185.11	288.37	507.03
<b>Elora</b> R.P.D.—Pilkington, Nichol, Garafra W. and Peel twps. ....	29,183.95	103.4	489.52	886.68	1,366.55
<b>Essex</b> R.P.D.—Sandwich S., Maidstone, Rochester, Colchester N., Gosfield N., Gosfield S. and Mersea twps. ....	55,909.03	207.1	980.47	1,623.87	2,587.16

## SYSTEM

## N.—COST OF POWER

the Power Commission Act—of Power supplied to it by the Commission; the amount cost; and the amount remaining to be credited or charged to each Municipality cost of power supplied to it in the year ending October 31, 1931

costs and fixed charges						Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment	
Renewals	Obsolescence and contingencies	Sinking fund	Cost in excess of revenue from power sold to private companies	Total cost of power for year as provided to be paid under Power Commission Act	Amounts paid to the Commission by each municipality	Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,394.77	530.01	1,828.07	729.22	21,519.56	21,519.56	see page	185
359.32	117.28	372.63	113.64	4,471.62	4,471.62	"	"
200.81	79.08	270.61	125.10	3,709.42	3,709.42	"	"
696.59	291.28	949.77	446.66	12,464.65	12,464.65	"	"
189.22	53.14	172.67	37.22	1,985.27	1,985.27	"	"
278.77	110.92	345.54	145.25	4,121.51	4,121.51	"	"
435.35	171.11	563.24	251.96	6,883.04	6,883.04	"	"
716.04	293.89	944.63	417.14	10,989.11	10,989.11	"	"
116.54	52.18	188.10	107.59	2,319.21	2,319.21	"	"
326.87	108.33	349.96	115.08	4,322.99	4,322.99	"	"
530.44	205.05	671.22	288.19	7,974.69	7,974.69	"	"
714.96	260.28	845.40	331.25	9,989.88	9,989.88	"	"
82.79	27.72	89.16	29.29	1,067.02	1,067.02	"	"
249.27	74.30	250.20	72.90	3,074.86	3,074.86	see page	187
701.40	300.51	985.12	481.90	11,664.12	11,664.12	"	"
46.15	14.77	55.95	23.78	661.05	661.05	"	"
260.14	94.09	307.33	120.25	4,045.35	4,045.35	"	"
96.10	35.26	112.05	43.06	1,266.98	1,266.98	"	"
264.98	93.37	303.36	113.86	3,518.32	3,518.32	"	"
464.37	180.44	572.25	228.06	6,636.62	6,636.62	"	"



## NIAGARA

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Rural Power District	Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Cost of power purchased	Share of operating	
				Operating, maintenance and administrative expenses	Interest
	\$ c.		\$ c.	\$ c.	\$ c.
<b>Exeter</b> R.P.D.—Hay, Stephen, Osborne, Tuckersmith, Biddulph and Bosanquet twps. ....	77,516.62	232.2	1,099.31	2,653.96	3,581.20
<b>Forest</b> R.P.D.—Plympton, Warwick, Bosanquet, Williams W. and Adelaide twps. ....	9,793.45	25.4	120.25	400.08	452.18
<b>Galt</b> R.P.D.—Dumfries N., Dumfries S. and Beverly twps. ....	33,537.32	151.8	718.66	1,757.50	1,598.84
<b>Georgetown</b> R.P.D.—Esquesing and Chinguacousy twps. ....	32,380.54	111.1	525.98	942.30	1,518.31
<b>Goderich</b> R.P.D.—Colborne, Goderich, Ashfield and Wawanosh W. twps. ....	22,180.28	64.0	303.00	814.07	1,028.84
<b>Grantham</b> R.P.D.—Grantham and Niagara twps. ....	95,034.32	486.1	3,324.87	2,818.64	4,566.76
<b>Guelph</b> R.P.D.—Eramosa, Nassagaweya, Guelph and Puslinch twps. ....	83,882.19	327.2	1,549.06	2,648.51	3,785.14
<b>Haldimand</b> R.P.D.—Seneca, Walpole, Rainham, Cayuga N. and Oneida twps. ....	56,785.63	193.9	917.98	1,807.16	2,663.59
<b>Harriston</b> R.P.D.—Minto and Howick twps. ....	4,233.83	12.1	57.28	205.57	197.53
<b>Harrow</b> R.P.D.—Colchester S., Malden, Colchester N. and Gosfield S. twps. ....	109,313.30	363.9	1,722.81	4,060.91	4,973.53
<b>Ingersoll</b> R.P.D.—Zorra E., Dorchester N., Dereham, Oxford N., Nissouri E., Zorra W. and Oxford W. twps. ....	86,849.89	313.8	1,485.61	2,865.09	3,961.62
<b>Jordan</b> R.P.D.—Louth, Thorold, Pelham and Grantham twps. ....	44,474.09	224.0	1,060.48	1,188.25	2,143.81
<b>Keswick</b> R.P.D.—Georgina, Gwillimbury N. and Gwillimbury E. twps. ....	113,296.44	314.1	1,487.03	5,688.21	4,657.12
<b>Kingsville</b> R.P.D.—Gosfield N., Gosfield S., Mersea and Romney twps. ....	150,246.77	512.6	2,426.79	5,253.89	6,923.71
<b>Listowel</b> R.P.D.—Wallace, Elma and Grey twps. ....	27,713.17	101.4	480.06	1,039.50	1,303.34
<b>London</b> R.P.D.—Westminster, Delaware, London, Nissouri W. and Lobo twps. ....	324,122.85	1,382.5	6,545.15	8,760.14	15,289.27
<b>Lucan</b> R.P.D.—Stephen, London, McGillivray and Biddulph twps. ....	15,584.81	59.7	282.64	532.27	728.48
<b>Lynden</b> R.P.D.—Beverly, Ancaster, Brantford and Dumfries S. twps. ....	40,895.87	145.5	688.84	1,426.05	1,919.81
<b>Markham</b> R.P.D.—Markham, Scarboro, Pickering and Whitechurch twps. ....	83,069.40	295.8	1,400.40	2,553.73	3,761.71
<b>Merlin</b> R.P.D.—Romney, Tilbury E. and Raleigh twps. ....	50,798.86	143.9	681.26	1,901.03	2,357.45
<b>Milton</b> R.P.D.—Nassagaweya, Esquesing, Trafalgar and Nelson twps. ....	29,390.09	114.6	542.55	1,404.93	1,387.45
<b>Milverton</b> R.P.D.—Mornington, Wellesley, Ellice and Elma twps. ....	14,167.34	52.4	248.08	427.23	667.37

## SYSTEM

## N.—COST OF POWER

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costs and fixed charges			Cost in excess of revenue from power sold to private companies	Total cost of power for year as provided to be paid under Power Commission Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment	
Renewals	Obsolescence and contingencies	Sinking fund				Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
769.87	239.95	805.62	255.70	9,405.61	9,405.61	see page	187
102.66	31.21	102.03	27.97	1,236.38	1,236.38	"	"
249.09	105.09	347.48	167.16	4,943.82	4,943.82	"	"
300.62	103.50	337.05	122.35	3,850.11	3,850.11	"	"
224.93	68.11	231.71	70.48	2,741.14	2,741.14	"	"
637.69	276.57	983.79	535.30	13,143.62	13,143.62	"	"
647.77	260.73	825.87	360.32	10,077.40	10,077.40	"	"
528.83	173.85	589.57	213.52	6,894.50	6,894.50	"	"
43.09	13.35	44.20	13.32	574.34	574.34	"	"
955.02	346.25	1,103.14	400.74	13,562.40	13,562.40	"	"
735.06	269.05	873.65	345.56	10,535.64	10,535.64	"	"
304.11	132.69	460.54	246.67	5,536.55	5,536.55	"	"
910.95	301.50	1,042.16	345.89	14,432.86	14,432.86	"	"
1,339.98	488.31	1,550.19	564.48	18,547.35	18,547.35	"	"
243.96	90.02	288.19	111.66	3,556.73	3,556.73	"	"
2,511.67	1,025.47	3,341.95	1,522.43	38,996.08	38,996.08	"	"
132.23	48.94	161.00	65.74	1,951.30	1,951.30	"	"
376.29	126.61	427.97	160.22	5,125.79	5,125.79	see page	189
645.73	240.35	832.50	325.74	9,760.16	9,760.16	"	"
514.81	166.18	529.29	158.47	6,308.49	6,308.49	"	"
248.75	87.55	305.39	126.20	4,102.82	4,102.82	"	"
123.77	46.80	147.31	57.70	1,718.26	1,718.26	"	"

## NIAGARA

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Rural Power District	Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Cost of power purchased	Share of operating	
				Operating maintenance and administrative expenses	Interest
	\$ c.		\$ c.	\$ c.	\$ c.
<b>Mitchell</b> R.P.D.—Hibbert, Fullarton, Downie, Ellice, Logan, McKillop and Elma twps. ....	45,610.31	163.6	774.53	1,450.06	2,142.56
<b>Newmarket</b> R.P.D.—Georgina, Gwillimbury E., King, Whitchurch, Scott and Uxbridge twps. ....	63,027.51	222.9	1,055.27	2,216.21	2,854.18
<b>Niagara</b> R.P.D.—Niagara and Stamford twps. ....	95,307.44	541.3	2,562.66	2,669.00	4,633.81
<b>Norwich</b> R.P.D.—Norwich N., Norwich S., Dereham, Oxford E., Burford, Windham and Middleton twps. ....	57,828.35	221.1	1,046.75	1,847.51	2,582.81
<b>Oil Springs</b> R.P.D.—Enniskillen, Dawn and Brooke twps. ....	13,883.55	39.7	187.95	580.98	639.96
<b>Palmerston</b> R.P.D.—Maryborough, Peel, Arthur, Wallace and Minto twps. ....	7,788.38	26.9	127.35	353.88	366.93
<b>Petrolia</b> R.P.D.—Sarnia, Plympton, Enniskillen and Moore twps. ....	8,129.02	26.3	124.52	281.92	372.72
<b>Preston</b> R.P.D.—Waterloo, Guelph, Puslinch, Dumfries N. and Woolwich twps. ....	172,503.94	747.4	3,538.41	4,887.82	8,181.08
<b>Ridgetown</b> R.P.D.—Howard, Orford, Harwich, Aldborough and Rondeau Park twps. ....	90,967.95	274.8	1,300.99	3,779.97	4,213.71
<b>St. Jacobs</b> R.P.D.—Wellesley, Woolwich, Peel and Waterloo twps. ....	53,923.02	214.8	1,016.93	1,562.01	2,540.56
<b>St. Mary's</b> R.P.D.—Fullarton, Usborne, Blanshard, Downie, Nissouri E. and Nissouri W. twps. ....	57,287.31	196.3	929.34	2,007.68	2,686.25
<b>St. Thomas</b> R.P.D.—Southwold, Yarmouth, Westminster and Dunwich twps. ....	103,205.35	430.4	2,037.63	3,200.31	4,865.45
<b>Saltfleet</b> R.P.D.—Saltfleet, Barton, Binbrook and Grimsby N. twps. ....	172,894.69	658.8	6,605.55	5,255.98	8,072.13
<b>Sandwich</b> R.P.D.—Sandwich W., Sandwich E., Sandwich S., Maidstone, Anderdon and Colchester N. twps. ....	244,034.17	966.2	4,574.27	6,239.34	11,465.40
<b>Sarnia</b> R.P.D.—Sarnia, Moore and Plympton twps. ....	144,305.59	485.3	2,297.55	5,549.14	6,462.25
<b>Scarboro</b> R.P.D.—Scarboro, Pickering and York N. twps. ....	65,376.10	258.6	1,224.29	1,640.32	3,082.21
<b>Seaforth</b> R.P.D.—Tuckersmith, McKillop and Hibbert twps. ....	13,095.62	46.3	219.20	496.64	615.56
<b>Simcoe</b> R.P.D.—Woodhouse, Charlotteville, Windham, Townsend and Walpole twps. ....	36,990.22	159.1	753.22	1,466.72	1,759.85
<b>Stamford</b> R.P.D.—Thorold twp. ....	32,818.08	172.6	817.14	925.65	1,594.81
<b>Stratford</b> R.P.D.—Ellice, Downie, Easthope N. and Easthope S. twps. ....	38,998.08	172.4	816.19	1,116.97	1,847.09
<b>Strathroy</b> R.P.D.—Lobo, Adelaide, Metcalfe, Ekfrid, Caradoc and Williams E. twps. ....	25,199.89	81.8	387.27	1,097.35	1,178.18



## SYSTEM

N.—COST OF POWER.

the Power Commission Act—of Power supplied to it by the Commission; the amount cost; and the amount remaining to be credited or charged to each Municipality cost of power supplied to it in the year ending October 31, 1931

costs and fixed charges			Cost in excess of revenue from power sold to private companies	Total cost of power for year as provided to be paid under Power Commission Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment	
Renewals	Obsolescence and contingencies	Sinking fund				Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
407.74	155.07	474.90	180.16	5,585.02	5,585.02	see page	189
492.26	187.15	631.31	245.46	7,681.84	7,681.84	"	"
565.03	258.75	985.55	596.08	12,270.88	12,270.88	"	"
459.74	172.28	574.56	243.48	6,927.13	6,927.13	"	"
139.33	48.25	144.64	43.72	1,784.83	1,784.83	"	"
71.26	24.98	81.05	29.62	1,055.07	1,055.07	*	"
74.16	26.55	83.09	28.96	991.92	991.92	"	"
1,338.34	562.18	1,789.50	823.06	21,120.39	21,120.39	"	"
894.65	293.85	948.67	302.61	11,734.45	11,734.45	"	"
449.11	173.63	560.15	236.54	6,538.93	6,538.93	"	"
521.92	204.49	596.15	216.17	7,162.00	7,162.00	"	"
823.78	338.09	1,069.79	473.97	12,809.02	12,809.02	"	"
1,492.61	542.36	1,789.57	725.49	24,483.69	24,483.69	"	"
1,968.19	797.23	2,530.58	1,064.00	28,639.01	28,639.01	"	"
1,231.99	463.92	1,437.22	534.42	17,976.49	17,976.49	"	"
491.10	196.54	676.28	284.77	7,595.51	7,595.51	"	"
118.22	41.81	136.40	50.98	1,678.81	1,678.81	"	"
289.95	114.34	384.28	175.21	4,943.57	4,943.57	"	"
216.14	96.97	341.63	190.07	4,182.41	4,182.41	see page	191
292.84	124.42	404.38	189.85	4,791.74	4,791.74	"	"
240.06	84.41	261.93	90.08	3,339.28	3,339.28	"	"

## NIAGARA

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such upon ascertainment (by annual adjustment) of the actual

Rural Power District	Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Cost of power purchased	Share of operating	
				Operating maintenance and administrative expenses	Interest
	\$ c.		\$ c.	\$ c.	\$ c.
<b>Streetsville</b> R.P.D.—Toronto, Trafalgar, Esquesing and Chinguacousy twps...	101,515.63	376.0	1,780.09	3,693.47	4,783.04
<b>Tavistock</b> R.P.D.—Easthope N., Easthope S., Zorra E. and Ellice twps. ....	37,271.25	141.5	669.90	1,414.91	1,755.04
<b>Thamesville</b> R.P.D.—Camden, Euphemia, Zone, Orford, Howard, Chatham Harwich twps. ....	26,304.41	93.6	443.13	1,091.61	1,235.97
<b>Tilbury</b> R.P.D.—Dover, Tilbury E., Tilbury W., Tilbury N., Romney, Mersea and Rochester twps. ....	25,563.37	84.7	401.00	938.10	1,190.98
<b>Tillsonburg</b> R.P.D.—Norwich S., Bayham, Dorchester S., Malahide, Houghton, Dereham, Middleton, Walsingham and North Norwich N. twps. ....	82,448.59	288.6	1,366.31	2,984.14	3,686.40
<b>Wallaceburg</b> R.P.D.—Dover E., Chatham and Sombra twps. ....	51,296.73	170.1	805.30	1,591.72	2,376.95
<b>Walsingham</b> R.P.D.—Walsingham N., Walsingham S., Houghton, Charlotteville, Windham and Middleton twps..	43,930.00	101.3	479.58	1,537.74	2,017.97
<b>Walton</b> R.P.D.—Wawanosh E., Wawanosh W., Morris, Grey, Hullett and McKillop twps. ....	24,143.99	61.4	290.69	990.82	1,110.97
<b>Waterdown</b> R.P.D.—Flamboro E. Flamboro W. and Nelson twps. ....	120,807.91	469.9	4,831.64	3,976.97	5,555.81
<b>Waterford</b> R.P.D.—Windham and Townsend twps. ....	33,327.81	137.4	650.50	987.12	1,580.15
<b>Watford</b> R.P.D.—Warwick, Adelaide and Metcalfe twps. ....	5,101.64	13.8	65.33	197.17	236.52
<b>Welland</b> R.P.D.—Bertie, Pelham, Thorold, Crowland, Wainfleet, Humberstone, Willoughby and Moulton twps. ....	221,164.85	1,074.5	5,086.99	8,994.76	10,672.11
<b>Woodbridge</b> R.P.D.—York North, Toronto, Vaughan, Etobicoke, Toronto Gore, Albion, King and Chinguacousy twps. ....	140,500.90	517.1	2,448.09	5,202.29	6,627.25
<b>Woodstock</b> R.P.D.—Oxford W., Oxford N., Oxford E., Burford, Blenheim, Blandford, Zorra W. and Zorra E. twps. ....	117,936.25	484.6	2,294.23	3,125.25	5,199.89
Totals—Municipalities. ....	122,893,005.99	556,410.4	2,634,205.56	2,856,938.18	5,814,119.26
Totals—Rural power districts. ....	5,693,441.53	21,807.0	112,433.60	190,230.43	263,739.83
Totals—Companies. ....	47,392,534.34	259,897.6	1,232,884.84	1,105,455.39	2,325,150.24
	175,978,981.86				
Non-operating capital. ....	324,517.65				
Grand total. ....	176,303,499.51	838,115.0	3,979,524.00	4,152,624.00	8,403,009.33

SYSTEM

N.—COST OF POWER

the Power Commission Act—of Power supplied to it by the Commission; the amount cost; and the amount remaining to be credited or charged to each Municipality cost of power supplied to it in the year ending October 31, 1931

costs and fixed charges			Cost in excess of revenue from power sold to private companies	Total cost of power for year as provided to be paid under Power Commission Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment	
Renewals	Obsolescence and contingencies	Sinking fund				Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
892.43	342.62	1,055.55	414.05	12,961.25	12,961.25	see page	191
320.08	121.72	387.86	155.82	4,825.33	4,825.33	"	"
233.80	86.92	273.33	103.07	3,467.83	3,467.83	"	"
236.98	82.76	265.77	93.27	3,208.86	3,208.86	"	"
704.63	248.40	823.37	317.81	10,131.06	10,131.06	"	"
477.31	170.54	533.54	187.32	6,142.68	6,142.68	"	"
490.13	133.85	459.15	111.55	5,229.97	5,229.97	"	"
258.43	75.10	252.23	67.61	3,045.85	3,045.85	"	"
982.71	361.31	1,218.95	517.46	17,444.85	17,444.85	"	"
270.41	107.99	345.93	151.30	4,093.40	4,093.40	"	"
52.77	16.68	53.17	15.20	636.84	636.84	"	"
1,625.91	644.02	2,316.81	1,183.25	30,523.85	30,523.85	"	"
1,247.91	443.81	1,472.47	569.44	18,011.26	18,011.26	"	"
834.92	353.64	1,138.08	533.65	13,479.66	13,479.66	"	"
849,759.60	363,197.38	1,269,087.97	612,728.85	14,400,036.80	15,047,450.32	694,921.68	47,508.16
47,061.26	17,688.63	58,191.42	24,014.17	713,359.34	713,359.34		
285,485.15	132,534.66	489,950.94	(636,743.02)	4,934,718.20	4,934,718.20		
1,182,306.01	513,420.67	1,817,230.33	.....	20,048,114.34	20,695,527.86	.....	.....



## NIAGARA SYSTEM—

Statement showing the costs of distribution of power within each Rural Power the amounts remaining to be credited to certain Districts or charged to the adjustment) of the actual costs in the

District and municipalities comprised therein	Total capital cost of each district, Provincial Government grant received and applied thereagainst, and the balance representing the investment by the Commission			Cost of power delivered to districts as shown in "cost of power" table preceding
	Total capital cost	Government grant	Commission's investment	
	\$ c.	\$ c.	\$ c.	\$ c.
Acton R.P.D.—Erin, Esquesing and Nassagaweya twps.....	14,289.65	7,144.83	7,144.82	277.42
Ailsa Craig R.P.D.—McGillivray, Williams E. and Lobo twps.....	8,773.84	4,386.92	4,386.92	67.47
Alvinston R.P.D.—Brooke twp.....	5,435.83	2,717.91	2,717.92	224.58
Amherstburg R.P.D.—Anderdon, Malden, Colchester N. and Colchester S. twps.....	119,327.78	59,578.39	59,749.39	18,672.51
Aylmer R.P.D.—Dorchester S., Malahide, Yarmouth, Bayham, Dorchester N. and Dereham twps.....	*167,753.37	82,239.41	85,513.96	8,313.77
Ayr R.P.D.—Dumfries N., Dumfries S. and Blenheim twps.....	*39,128.18	19,526.74	19,601.44	920.15
Baden R.P.D.—Blandford, Wilmot, Zorra E., Easthope S., Easthope N., Wellesley, Waterloo and Blenheim twps.....	*140,841.42	70,205.93	70,635.49	7,881.74
Beamsville R.P.D.—Grimsby N., Grimsby S., Caistor, Gainsborough, Clinton, Pelham, and Wainfleet twps.....	322,476.40	155,838.77	166,637.63	28,211.28
Belle River R.P.D.—Maidstone and Rochester twps.....	86,381.18	43,114.42	43,266.76	8,678.10
Blenheim R.P.D.—Raleigh and Harwich twps.....	*92,759.82	45,539.46	47,220.36	3,931.02
Bond Lake R.P.D.—King, Vaughan, Markham, Whitchurch and York N. twps.....	290,819.36	145,409.68	145,409.68	21,519.56
Bothwell R.P.D.—Ekfrid, Zone, Orford, Aldborough and Mosa twps.....	*51,798.35	25,525.64	26,272.71	4,471.62
Brampton R.P.D.—Chinguacousy and Toronto twps.....	77,108.51	38,554.26	38,554.25	3,709.42
Brant R.P.D.—Brantford, Burford, Blenheim, Dumfries S., Onondaga and Oakland twps....	*198,684.68	98,049.88	100,634.80	12,464.65
Brigden R.P.D.—Moore and Sombra twps....	49,714.50	24,857.25	24,857.25	1,985.27
Burford R.P.D.—Burford, Brantford, Oakland, Townsend and Windham twps.....	86,332.17	43,166.08	43,166.09	4,121.51
Caledonia R.P.D.—Ancaster, Seneca, Glanford, Oneida, Onondaga, Binbrook, Caistor, Grimsby S. and Barton twps.....	184,325.20	92,162.60	92,162.60	6,883.04
Chatham R.P.D.—Dover E., Chatham, Raleigh and Harwich twps.....	227,021.81	113,510.90	113,510.91	10,989.11
Chippawa R.P.D.—Willoughby, Bertie and Crowland twps.....	38,544.24	19,272.12	19,272.12	2,319.21
Clinton R.P.D.—Goderich, Stanley, Tucker-smith, Hullett and Hay twps.....	116,303.05	57,212.75	59,090.30	4,322.99
Delaware R.P.D.—Delaware, Westminster, Caradoc, Ekfrid, Lobo and London twps.....	*208,353.57	103,243.15	105,110.42	7,974.69
Dorchester R.P.D.—London, Nissouri W., Nissouri E., Oxford N., Dorchester N., Dorchester S., Westminster and Yarmouth twps.....	*193,271.63	95,539.90	97,731.73	9,989.88
Dresden R.P.D.—Camden, Chatham Gore and Dawn twps.....	36,226.09	18,113.05	18,113.04	1,067.02

Note.—Items marked \* include portions of transmission lines of systems aggregating

## RURAL POWER DISTRICTS

## N.—RURAL OPERATING

District, the revenues collected from (or charged to) customers within each District, and Municipalities comprising certain other Districts upon ascertainment (by annual year ending October 31, 1931)

Distribution costs and fixed charges					Total cost	Revenue from power and light customers in each district	Amounts remaining to be credited to certain districts or charged to the municipalities comprising certain other districts	
Cost of operation, maintenance and administration	Interest on capital investment	Renewal charges	Obsolescence and contingencies	Sinking fund			Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
352.86	272.12	247.25	123.62	65.09	1,338.36	1,096.96	.....	241.40
70.75	51.12	46.45	23.23	12.23	271.25	361.95	90.70	.....
102.28	119.65	108.72	54.36	28.62	638.21	420.34	.....	217.87
5,246.14	2,440.61	2,214.15	1,107.07	583.78	30,264.26	34,751.61	4,487.35	.....
6,770.18	3,713.44	3,309.96	1,654.98	888.22	24,650.55	27,069.77	2,419.22	.....
773.38	828.59	751.37	375.69	198.20	3,847.38	3,831.18	.....	16.20
3,632.53	2,992.54	2,710.47	1,355.24	715.79	19,288.31	19,308.69	20.38	.....
17,019.88	6,380.92	5,702.01	2,851.00	1,526.27	61,691.36	68,560.67	6,869.31	.....
4,224.21	1,872.63	1,698.70	849.35	447.92	17,770.91	22,211.54	4,440.63	.....
3,492.08	2,009.68	1,792.40	896.21	480.70	12,602.09	16,188.36	3,586.27	.....
13,734.89	5,826.27	5,272.87	2,636.44	1,393.60	50,383.63	57,793.25	7,409.62	.....
3,071.48	1,113.74	997.01	498.50	266.40	10,418.75	10,155.22	.....	263.53
1,403.71	1,628.39	1,479.58	739.79	389.50	9,350.39	10,034.94	684.55	.....
5,095.79	3,825.61	3,424.30	1,712.15	915.06	27,437.56	27,858.44	420.88	.....
1,252.51	1,017.75	924.74	462.37	243.44	5,886.08	4,952.66	.....	933.42
1,694.54	1,692.31	1,537.65	768.83	404.79	10,219.63	11,479.92	1,260.29	.....
5,441.21	3,275.41	2,976.08	1,488.04	783.45	20,847.23	20,757.59	.....	89.64
9,059.13	4,783.94	4,346.75	2,173.38	1,144.28	32,496.59	37,246.67	4,750.08	.....
1,909.61	838.70	762.05	381.03	200.61	6,411.21	6,933.36	522.15	.....
2,437.90	2,243.78	2,005.58	1,002.79	536.69	12,549.73	12,413.37	.....	136.36
13,104.65	4,524.12	4,078.02	2,039.01	1,082.14	32,802.63	29,285.52	.....	3,517.11
10,152.47	4,169.90	3,744.99	1,872.50	997.41	30,927.15	29,625.16	.....	1,301.99
816.39	711.08	646.10	323.05	170.08	3,733.72	3,681.16	.....	52.56

\$42,831.71 used for the purposes of rural power districts.

## NIAGARA SYSTEM—

Statement showing the costs of distribution of power within each Rural Power the amounts remaining to be credited to certain Districts or charged to the adjustment) of the actual costs in the

District and municipalities comprised therein	Total capital cost of each district, Provincial Government grant received and applied thereagainst, and the balance representing the investment by the Commission			Cost of power delivered to districts as shown in "cost of power" table preceding
	Total capital cost	Government grant	Commission's investment	
	\$ c.	\$ c.	\$ c.	\$ c.
<b>Drumbo</b> R.P.D.—Blenheim, Burford and Blandford twps. ....	* 87,935.98	42,581.22	45,354.76	3,074.86
<b>Dundas</b> R.P.D.—Flamboro W., Beverly, Glanford, Ancaster, Flamboro E. and Nelson twps. ....	217,102.98	105,158.35	111,944.63	11,664.12
<b>Dunnville</b> R.P.D.—Moulton and Dunn twps. .	22,796.81	11,398.40	11,398.41	661.05
<b>Dutton</b> R.P.D.—Dunwich and Aldboro twps. .	71,844.00	35,922.00	35,922.00	4,045.35
<b>Elmira</b> R.P.D.—Woolwich, Peel and Pilkington twps. ....	25,946.64	12,973.32	12,973.32	1,266.98
<b>Elora</b> R.P.D.—Pilkington, Nichol, Garafraxa W. and Peel twps. ....	72,048.19	36,024.09	36,024.10	3,518.32
<b>Essex</b> R.P.D.—Sandwich S., Maidstone, Rochester, Colchester N., Gosfield N., Gosfield S. and Mersea twps. ....	*133,643.40	65,962.02	67,681.38	6,636.62
<b>Exeter</b> R.P.D.—Hay, Stephen, Usborne, Tucker-smith, Biddulph and Bosanquet twps. ....	*124,877.46	61,763.09	63,114.37	9,405.61
<b>Forest</b> R.P.D.—Plympton, Warwick, Bosanquet, Williams W. and Adelaide twps. ....	*55,581.55	27,459.42	28,122.13	1,236.38
<b>Galt</b> R.P.D.—Dumfries N., Dumfries S. and Beverly twps. ....	74,107.78	37,053.89	37,053.89	4,943.82
<b>Georgetown</b> R.P.D.—Esquesing and Chingua-cousy twps. ....	83,413.58	41,706.79	41,706.79	3,850.11
<b>Goderich</b> R.P.D.—Colborne, Goderich, Ashfield and Wawanosh W. twps. ....	50,088.57	25,044.28	25,044.29	2,741.14
<b>Grantham</b> R.P.D.—Grantham and Niagara twps. ....	131,197.14	61,518.57	69,678.57	13,143.62
<b>Guelph</b> R.P.D.—E r a m o s a, Nassagaweya, Guelph and Puslinch twps. ....	164,531.48	82,240.14	82,291.34	10,077.40
<b>Haldimand</b> R.P.D.—Seneca, Walpole, Rainham, Cayuga N. and Oneida twps. ....	*94,791.28	46,697.12	48,094.16	6,894.50
<b>Harrison</b> R.P.D.—Minto and Howick twps. .	*31,235.27	15,337.48	15,897.79	574.34
<b>Harrow</b> R.P.D.—Colchester S., Malden, Colchester N. and Gosfield S. twps. ....	131,718.56	65,859.28	65,859.28	13,562.40
<b>Ingersoll</b> R.P.D.—Zorra E., Dorchester N., Dereham, Oxford N., Nissouri E., Zorra W. and Oxford W. twps. ....	279,995.25	139,997.63	139,997.62	10,535.64
<b>Jordan</b> R.P.D.—Louth, Thorold, Pelham and Grantham twps. ....	87,976.27	43,988.14	43,988.13	5,536.55
<b>Keswick</b> R.P.D.—Georgina, Gwillimbury N. and Gwillimbury E. twps. ....	140,859.90	68,853.76	72,006.14	14,432.86
<b>Kingsville</b> R.P.D.—Gosfield N., Gosfield S., Mersea and Romney twps. ....	*269,434.78	132,630.71	136,804.07	18,547.35
<b>Listowel</b> R.P.D.—Wallace, Elma and Grey twps. ....	75,183.19	37,591.59	37,591.60	3,556.73
<b>London</b> R.P.D.—Westminster, Delaware, London, Nissouri W. and Lobo twps. ....	*409,637.62	204,498.97	205,138.65	38,996.08
<b>Lucan</b> R.P.D.—Stephen, London, McGillivray and Biddulph twps. ....	*55,492.46	27,606.15	27,886.31	1,951.30

Note.—Items marked \* include portions of transmission lines of systems aggregating



## RURAL POWER DISTRICTS

## N.—RURAL OPERATING

District, the revenues collected from (or charged to) customers within each District, and Municipalities comprising certain other Districts upon ascertainment (by annual year ending October 31, 1931)

Distribution costs and fixed charges					Total cost	Revenue from power and light customers in each district	Amounts remaining to be credited to certain districts or charged to the municipalities comprising certain other districts	
Cost of operation, maintenance and adminis-	Interest on capital investment	Renewal charges	Obsolescence and contingencies	Sinking fund			Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,911.74	1,813.09	1,591.93	795.96	433.67	9,621.25	10,682.89	1,061.64	.....
5,180.94	4,200.13	3,723.23	1,861.61	1,004.64	27,634.67	32,200.84	4,566.17	.....
646.48	384.63	349.48	174.74	92.00	2,308.38	1,741.20	.....	567.18
2,226.97	1,387.17	1,260.40	630.20	331.80	9,881.89	9,457.79	.....	424.10
941.34	486.35	441.90	220.95	116.33	3,473.85	3,358.95	.....	114.90
2,388.56	1,317.36	1,196.97	598.49	315.10	9,334.80	9,053.68	.....	281.12
5,263.92	2,861.66	2,565.76	1,282.87	684.48	19,295.31	22,031.11	2,735.80	.....
7,374.47	2,643.29	2,375.28	1,187.63	632.26	23,618.54	25,110.57	1,492.03	.....
1,235.03	907.48	811.29	405.65	217.07	4,812.90	4,978.19	165.29	.....
2,398.41	1,364.53	1,239.83	619.92	326.39	10,892.90	10,825.93	.....	66.97
2,619.85	1,624.80	1,476.31	738.16	388.64	10,697.87	10,214.48	.....	483.39
1,277.82	785.42	713.64	356.82	187.87	6,062.71	5,673.20	.....	389.51
6,604.88	2,459.03	2,125.51	1,062.75	588.18	25,983.97	24,981.34	.....	1,002.63
5,039.80	3,722.89	3,381.64	1,690.82	890.49	24,803.04	23,102.39	.....	1,700.65
3,490.79	1,500.04	1,335.80	667.90	358.80	14,247.83	16,062.07	1,814.24	.....
794.04	389.39	342.60	171.29	93.14	2,364.80	1,891.43	.....	473.37
6,151.64	2,712.83	2,464.91	1,232.46	648.89	26,773.13	30,243.61	3,470.48	.....
6,873.50	5,672.50	5,154.11	2,577.05	1,356.82	32,169.62	33,182.08	1,012.46	.....
3,686.96	1,873.11	1,701.93	850.97	448.03	14,097.55	18,302.16	4,204.61	.....
6,660.18	2,349.00	2,102.90	1,051.45	561.86	27,158.25	26,787.34	.....	370.91
13,517.13	5,720.46	5,134.14	2,567.06	1,368.29	46,854.43	51,769.90	4,915.47	.....
2,929.39	1,491.63	1,355.31	677.65	356.79	10,367.50	10,503.10	135.60	.....
21,804.13	8,774.66	7,959.98	3,979.99	2,098.84	83,613.68	87,270.00	3,656.32	.....
964.12	1,221.12	1,103.92	551.96	292.08	6,084.50	6,443.44	358.94	.....

\$42,831.71 used for the purposes of rural power districts.

## NIAGARA SYSTEM—

Statement showing the costs of distribution of power within each Rural Power the amounts remaining to be credited to certain Districts or charged to the adjustment) of the actual costs in the

District and municipalities comprised therein	Total capital cost of each district, Provincial Government grant received and applied thereagainst, and the balance representing the investment by the Commission			Cost of power delivered to districts as shown in "cost of power" table preceding
	Total capital cost	Government grant	Commission's investment	
	\$ c.	\$ c.	\$ c.	\$ c.
<b>Lynden</b> R.P.D.—Beverly, Ancaster, Brantford and Dumfries S. twps.....	91,485.35	45,742.67	45,742.68	5,125.79
<b>Markham</b> R.P.D.—Markham, Scarboro, Pickering and Whitchurch twps.....	*198,364.55	98,247.08	100,117.47	9,760.16
<b>Merlin</b> R.P.D.—Romney, Tilbury E. and Raleigh twps.....	*119,651.75	59,545.72	60,106.03	6,308.49
<b>Milton</b> R.P.D.—Nassagaweya, Esquesing, Trafalgar and Nelson twps.....	70,010.48	35,005.24	35,005.24	4,102.82
<b>Milverton</b> R.P.D.—Morningson, Wellesley, Ellice and Elma twps.....	56,144.98	28,072.49	28,072.49	1,718.26
<b>Mitchell</b> R.P.D.—Hibbert, Fullarton, Downie, Ellice, Logan, McKillop and Elma twps....	101,066.62	50,533.31	50,533.31	5,585.02
<b>Newmarket</b> R.P.D.—Georgina, Gwillimbury E., King, Whitchurch, Scott and Uxbridge twps.	99,470.94	49,735.47	49,735.47	7,681.84
<b>Niagara</b> R.P.D.—Niagara and Stamford twps..	*116,563.11	57,914.13	58,648.98	12,270.88
<b>Norwich</b> R.P.D.—Norwich N., Norwich S., Dereham, Oxford E., Burford, Windham and Middleton twps.....	*139,149.96	68,064.66	71,085.30	6,927.13
<b>Oil Springs</b> R.P.D.—Enniskillen, Dawn and Brooke twps.....	22,579.12	11,289.56	11,289.56	1,784.83
<b>Palmerston</b> R.P.D.—Maryborough, Peel, Arthur, Wallace and Minto twps.....	*44,513.30	22,069.89	22,443.41	1,055.07
<b>Petrolia</b> R.P.D.—Sarnia, Plympton, Enniskillen and Moore twps.....	*24,902.88	12,008.75	12,894.13	991.92
<b>Preston</b> R.P.D.—Waterloo, Guelph, Puslinch, Dumfries N. and Woolwich twps.....	*284,424.12	141,973.93	142,450.19	21,120.39
<b>Ridgetown</b> R.P.D.—Howard, Orford, Harwich, Aldborough and Rondeau Park twps.....	196,931.59	98,465.80	98,465.79	11,734.45
<b>St. Jacobs</b> R.P.D.—Wellesley, Woolwich, Peel and Waterloo twps.....	99,138.34	49,503.52	49,634.82	6,538.93
<b>St. Marys</b> R.P.D.—Fullarton, Usborne, Blanshard, Downie, Nissouri E. and Nissouri W. twps.....	173,218.30	86,609.15	86,609.15	7,162.00
<b>St. Thomas</b> R.P.D.—Southwold, Yarmouth, Westminster and Dunwich twps.....	276,335.79	137,474.14	138,861.65	12,809.02
<b>Saltfleet</b> R.P.D.—Saltfleet, Barton, Binbrook and Grimsby N. twps.....	273,582.37	134,083.94	139,498.43	24,483.69
<b>Sandwich</b> R.P.D.—Sandwich W., Sandwich E., Sandwich S., Maidstone, Anderdon and Colchester N. twps.....	330,603.03	165,301.52	165,301.51	28,639.01
<b>Sarnia</b> R.P.D.—Sarnia, Moore and Plympton twps.....	*203,503.61	99,510.14	103,993.47	17,976.49
<b>Scarboro</b> R.P.D.—Scarboro, Pickering and York N. twps.....	165,790.59	82,895.30	82,895.29	7,595.51
<b>Seaforth</b> R.P.D.—Tuckersmith, McKillop and Hibbert twps.....	22,694.34	10,716.97	11,977.37	1,678.81
<b>Simcoe</b> R.P.D.—Woodhouse, Charlotteville, Windham, Townsend and Walpole twps.....	*109,230.06	53,460.25	55,769.81	4,943.57

Note.—Items marked \* include portions of transmission lines of systems aggregating

## RURAL POWER DISTRICTS

N.—RURAL OPERATING

District, the revenues collected from (or charged to) customers within each District, and Municipalities comprising certain other Districts upon ascertainment (by annual year ending October 31, 1931

Distribution costs and fixed charges						Revenue from power and light customers in each district	Amounts remaining to be credited to certain districts or charged to the municipalities comprising certain other districts	
Cost of operation, maintenance and administration	Interest on capital investment	Renewal charges	Obsolescence and contingencies	Sinking fund	Total cost		Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
2,184.12	1,882.29	1,710.27	855.14	450.23	12,207.84	12,493.80	285.96	.....
5,587.23	4,143.66	3,727.58	1,863.78	991.13	26,073.54	32,565.42	6,491.88	.....
3,728.04	2,154.03	1,945.97	972.98	515.23	15,624.74	13,954.26	.....	1,670.48
4,020.26	1,481.01	1,345.66	672.83	354.25	11,976.83	11,912.65	.....	64.18
1,690.99	913.32	829.85	414.93	218.46	5,785.81	5,025.47	.....	760.34
2,920.63	1,933.67	1,756.96	878.48	462.52	13,537.28	14,556.59	1,019.31	.....
3,852.09	2,069.52	1,868.75	934.37	495.02	16,901.59	18,009.28	1,107.69	.....
5,156.32	2,505.62	2,261.94	1,130.97	599.33	23,925.06	26,332.32	2,407.26	.....
7,422.26	3,081.48	2,739.45	1,369.73	737.07	22,277.12	23,135.14	858.02	.....
1,486.78	494.29	449.12	224.56	118.23	4,557.81	4,495.73	.....	62.08
1,516.72	974.84	878.28	439.14	233.17	5,097.22	3,259.40	.....	1,837.82
1,122.73	556.26	487.71	243.85	133.05	3,535.52	3,450.15	.....	85.37
10,044.24	5,945.53	5,392.67	2,696.33	1,422.13	46,621.29	49,974.54	3,353.25	.....
6,362.60	4,194.09	3,810.80	1,905.40	1,003.19	29,010.53	29,404.49	393.96	.....
3,682.63	1,976.71	1,793.44	896.72	472.81	15,361.24	15,855.27	494.03	.....
3,579.77	3,358.99	3,052.02	1,526.01	803.44	19,482.23	18,186.75	.....	1,295.48
9,106.85	5,643.19	5,099.73	2,549.86	1,349.81	36,558.46	43,345.71	6,787.25	.....
18,384.67	5,469.65	4,896.17	2,448.09	1,308.30	56,990.57	53,273.86	.....	3,716.11
23,434.37	7,027.47	6,385.26	3,192.63	1,680.92	70,359.66	79,510.60	9,150.94	.....
12,867.11	4,413.75	3,920.73	1,960.36	1,055.73	42,194.17	44,536.48	2,342.31	.....
4,302.20	3,372.73	3,064.51	1,532.26	806.73	20,673.94	26,078.48	5,404.54	.....
1,417.90	501.89	432.37	216.18	120.05	4,367.20	4,196.80	.....	170.40
2,921.72	1,822.77	1,610.00	805.00	435.99	12,539.05	13,665.69	1,126.64	.....

\$42,831.71 used for the purposes of rural power districts.



## NIAGARA SYSTEM—

Statement showing the costs of distribution of power within each Rural Power the amounts remaining to be credited to certain Districts or charged to the adjustment) of the actual costs in the

District and municipalities comprised therein	Total capital cost of each district, Provincial Government grant received and applied thereagainst, and the balance representing the investment by the Commission			Cost of power delivered to districts as shown in "cost of power" table preceding
	Total capital cost	Government grant	Commission's investment	
	\$ c.	\$ c.	\$ c.	\$ c.
<b>Stamford</b> R.P.D.—Thorold twp.....	39,736.87	19,868.44	19,868.43	4,182.41
<b>Stratford</b> R.P.D.—Ellice, Downie, Easthope N. and Easthope S. twps.....	68,386.58	33,932.43	34,454.15	4,791.74
<b>Strathroy</b> R.P.D.—Lobo, Adelaide, Metcalfe, Ekfrid, Caradoc and Williams E. twps.....	99,034.35	49,340.40	49,693.95	3,339.28
<b>Streetsville</b> R.P.D.—Toronto, Trafalgar, Esquering and Chinguacousy twps.....	167,060.86	83,530.43	83,530.43	12,961.25
<b>Tavistock</b> R.P.D.—Easthope N., Easthope S., Zorra E. and Ellice twp.....	116,553.46	58,276.73	58,276.73	4,825.33
<b>Thamesville</b> R.P.D.—Camden, Euphemia, Zone, Orford, Howard, Chatham and Harwich twps.....	95,137.63	47,318.57	47,819.06	3,467.83
<b>Tilbury</b> R.P.D.—Dover W., Tilbury E., Tilbury W., Tilbury N., Romney, Mersea and Rochester twps.....	*85,583.34	42,185.21	43,398.13	3,208.86
<b>Tillsonburg</b> R.P.D.—Norwich S., Bayham, Dorchester S., Malahide, Houghton, Dereham, Middleton, Walsingham N., and Norwich N. twps.....	195,698.51	97,849.25	97,849.26	10,131.06
<b>Wallaceburg</b> R.P.D.—Dover E., Chatham and Sombra twps.....	143,784.79	71,560.03	72,224.76	6,142.68
<b>Walsingham</b> R. P. D. — Walsingham N., Walsingham S., Houghton, Charlotteville, Windham and Middleton twps.....	*111,970.72	55,406.54	56,564.18	5,229.97
<b>Walton</b> R.P.D.—Wawanosh E., Wawanosh W., Morris, Grey, Hullett and McKillop twps.....	*65,728.13	31,209.04	34,519.09	3,045.85
<b>Waterdown</b> R.P.D.—Flamboro E., Flamboro W., and Nelson twps.....	*175,897.53	77,335.80	98,561.73	17,444.85
<b>Waterford</b> R. P. D. — Windham and Townsend twps.....	90,627.80	45,313.90	45,313.90	4,093.40
<b>Watford</b> R.P.D.—Warwick, Adelaide and Metcalfe twps.....	23,961.35	11,980.67	11,980.68	636.84
<b>Welland</b> R.P.D.—Bertie, Pelham, Thorold, Crowland, Wainfleet, Humberstone, Willoughby and Moulton twps.....	545,540.52	269,708.47	275,832.05	30,523.85
<b>Woodbridge</b> R.P.D.—York N., Toronto, Vaughan, Etibicoke, Toronto Gore, Albion, King and Chinguacousy twps.....	*317,055.52	157,753.00	159,302.52	18,011.26
<b>Woodstock</b> R.P.D.—Oxford W., Oxford N., Oxford E., Burford, Blenheim, Blandford, Zorra W. and Zorra E. twps.....	213,080.41	106,540.20	106,540.21	13,479.66
	11,421,304.32	5,652,102.19	5,769,195.13	
Non-operating capital.....	137,028.86	68,489.00	68,539.86	
Totals.....	11,558,333.18	5,720,598.19	5,837,734.99	713,359.34

Note.—Items marked \* include portions of transmission lines of systems aggregating

RURAL POWER DISTRICTS

N.—RURAL OPERATING

District, the revenues collected from (or charged to) customers within each District, and Municipalities comprising certain other Districts upon ascertainment (by annual year ending October 31, 1931

Distribution costs and fixed charges					Total cost	Revenue from power and light customers in each district	Amounts remaining to be credited to certain districts or charged to the municipalities comprising certain other districts	
Cost of operation, maintenance and administration	Interest on capital investment	Renewal charges	Obsolescence and contingencies	Sinking fund			Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
4,848.29	843.00	765.96	382.98	201.64	11,224.28	10,974.52	.....	249.76
3,364.35	1,251.22	1,126.44	563.22	299.28	11,396.25	12,189.55	793.30	.....
3,152.18	2,064.28	1,868.56	934.28	493.76	11,852.34	10,214.61	.....	1,637.73
4,853.79	3,563.81	3,238.12	1,619.06	852.44	27,088.47	36,921.59	9,833.12	.....
4,571.65	2,442.65	2,219.42	1,109.71	584.26	15,753.02	14,943.46	.....	809.56
3,493.07	1,839.79	1,662.20	831.10	440.06	11,734.05	11,621.90	.....	112.15
2,325.94	1,576.09	1,408.54	704.27	376.99	9,600.69	10,092.27	491.58	.....
6,754.84	4,036.38	3,667.51	1,833.76	965.47	27,389.02	26,920.27	.....	468.75
6,067.58	3,063.85	2,775.61	1,387.81	732.85	20,170.38	20,660.21	489.83	.....
2,059.70	2,129.60	1,911.83	955.92	509.38	12,796.40	14,200.97	1,404.57	.....
2,511.83	1,395.20	1,201.49	600.75	333.72	9,088.84	9,954.88	866.04	.....
5,240.23	2,727.18	2,189.42	1,094.71	652.32	29,348.71	37,895.17	8,546.46	.....
1,598.63	1,861.34	1,691.24	845.62	445.22	10,535.45	12,218.99	1,683.54	.....
649.41	512.66	465.81	232.91	122.62	2,620.25	2,571.80	.....	48.45
26,783.12	11,374.31	10,111.20	5,055.60	2,720.61	86,568.69	95,038.89	8,470.20	.....
13,818.76	6,835.78	6,181.27	3,090.63	1,635.07	49,572.77	47,871.42	.....	1,701.35
8,761.78	4,588.76	4,169.41	2,084.71	1,097.60	34,181.92	35,141.18	959.26	.....
460,488.04	232,017.53	208,799.24	104,399.62	55,496.81	1,774,560.58	1,888,536.58	141,311.42	27,335.42

\$42,831.71 used for the purposes of rural power districts.

## NIAGARA

Statement showing the net Credit or Charge to each Municipality in respect of power made and interest added during the year. Also the net amount credited ending October 31, 1931, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1930		Cash receipts and payments on account of such credits and charges, also adjustments made during the year	
		Credit	Charge	Credited	Charged
		\$ c.	\$ c.	\$ c.	\$ c.
Acton.....	Jan., 1913	637.31			637.31
Agincourt.....	Nov., 1922	728.67			728.67
Ailsa Craig.....	Jan., 1916	211.72			211.72
Alvinston.....	April, 1922	134.50			134.50
Amherstburg.....	Nov., 1925	3,064.74			3,064.74
Ancaster twp.....	May, 1923	153.65			153.65
Arkona.....	Dec., 1926	243.58			243.58
Aylmer.....	Mar., 1918	2,024.91			2,024.91
Ayr.....	Jan., 1915		26.14	26.14	
Baden.....	May, 1912	324.85			324.85
Beachville.....	Aug., 1912	1,286.40			1,286.40
Belle River.....	Dec., 1922	447.69			447.69
Blenheim.....	Nov., 1915	587.78			587.78
Blyth.....	July, 1924	548.08			548.08
Bolton.....	Feb., 1915	321.72			321.72
Bothwell.....	Sept., 1915	119.66			119.66
Brampton.....	Nov., 1911	8,207.36			8,207.36
Brantford.....	Feb., 1914	11,803.58			11,803.58
Brantford twp.....	May, 1924		1,273.20	1,273.20	
Bridgeport.....	Mar., 1928		335.55	335.55	
Brigden.....	Jan., 1918	460.57			460.57
Brussels.....	July, 1924	382.44			382.44
Burford.....	June, 1915	875.51			875.51
Burgessville.....	Nov., 1916	84.05			84.05
Caledonia.....	Oct., 1912	626.39			626.39
Campbellville.....	Jan., 1925	744.35			744.35
Cayuga.....	Nov., 1924	888.39			888.39
Chatham.....	Feb., 1915	6,819.93			6,819.93
Chippawa.....	Sept., 1919		58.60	58.60	
Clifford.....	May, 1924	19.51			19.51
Clinton.....	Mar., 1914	870.75			870.75
Comber.....	May, 1915	130.15			130.15
Cottam.....	Nov., 1926	298.28			298.28
Courtright.....	Dec., 1923	319.63			319.63
Dashwood.....	Sept., 1917	251.23			251.23
Delaware.....	Mar., 1915	131.74			131.74
Dorchester.....	Dec., 1914	165.48			165.48
Drayton.....	Mar., 1918	238.79			238.79
Dresden.....	April, 1915	472.52			472.52
Drumbo.....	Dec., 1914		235.61		
Dublin.....	Oct., 1917		401.95		
Dundas.....	Jan., 1911	3,138.39			3,138.39
Dunnville.....	June, 1918	1,681.36			1,681.36
Dutton.....	Sept., 1915	783.25			783.25
East Windsor.....	Nov., 1922	7,551.82			7,551.82



## SYSTEM

N.—CREDIT OR CHARGE

supplied to it to October 31, 1930, the cash receipts and payments thereon, adjustments or charged to each municipality in respect of power supplied in the year as a credit or charge to each municipality at October 31, 1931

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1931		Accumulated amount standing as a credit or charge on October 31, 1931	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
12.29		585.42		597.71	
16.27		414.28		430.55	
3.53		315.58		319.11	
2.67		581.70		584.37	
54.27		2,565.24		2,619.51	
2.69		149.18		151.87	
4.27		150.90		155.17	
41.19		372.36		413.55	
	0.64	732.40		731.76	
6.44		257.40		263.84	
29.77		673.41		703.18	
8.54		140.70		149.24	
11.47		369.36		380.83	
10.45		188.85		199.30	
5.96			94.89		88.93
2.19			94.26		92.07
167.43		6,620.12		6,787.55	
232.84		9,590.37		9,823.21	
	25.53		1,042.53		1,068.06
	6.80		28.41		35.21
7.74		669.53		677.27	
7.08			10.37		3.29
20.69		565.23		585.92	
1.67			52.51		50.84
12.42		32.25		44.67	
5.33		15.22		20.55	
14.80		551.22		566.02	
117.34		6,087.65		6,204.99	
	1.59	306.47		304.88	
0.41			321.35		320.94
17.18		346.31		363.49	
2.74			496.42		493.68
6.55		279.68		286.23	
5.81		335.30		341.11	
4.54		58.22		62.76	
2.66			23.82		21.16
3.28		156.28		159.56	
4.58			552.67		548.09
7.87		782.30		790.17	
	9.42	246.68		1.65	
	16.08	85.35			332.68
55.72		860.97		916.69	
33.35		2,155.79		2,189.14	
13.05		485.27		498.32	
119.50		2,879.83		2,999.33	

## NIAGARA

Statement showing the net Credit or Charge to each Municipality in respect of power made and interest added during the year. Also the net amount credited ending October 31, 1931, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1930		Cash receipts and payments on account of such credits and charges, also adjustments made during the year	
		Credit	Charge	Credited	Charged
		\$ c.	\$ c.	\$ c.	\$ c.
Elmira.....	Nov., 1913	1,316.00			1,316.00
Elora.....	Nov., 1914		861.49	861.49	
Embro.....	Jan., 1915	704.40			704.00
Erieau.....	July, 1924		35.43	35.43	
Erie Beach.....	July, 1925	99.17			99.17
Essex.....	Nov., 1923	946.01			946.01
Etobicoke twp.....	Aug., 1917	6,034.43			6,034.43
Exeter.....	June, 1916	1,512.49			1,512.49
Fergus.....	Nov., 1914		340.16	372.88	
Fonthill.....	June, 1926	432.39			432.39
Forest.....	Mar., 1917	851.22			851.22
Galt.....	May, 1911	15,775.62			15,775.62
Georgetown.....	Sept., 1913	237.92			237.92
Glencoe.....	Aug., 1920	359.35			359.35
Goderich.....	Feb., 1914	1,968.53			1,968.53
Granton.....	July, 1916	71.42			71.42
Guelph.....	Dec., 1910	16,714.31			16,714.31
Hagersville.....	Sept., 1913	3,362.98			3,362.98
Hamilton.....	Feb., 1911	34,045.37			34,045.37
Harriston.....	July, 1916	454.99			454.99
Harrow.....	Nov., 1923	1,915.00			1,915.00
Hensall.....	Jan., 1917	1,121.62			1,121.62
Hespeler.....	Feb., 1911	3,462.97			3,462.97
Highgate.....	Dec., 1916	66.79			66.79
Humberstone.....	Oct., 1924		479.88		
Ingersoll.....	May, 1911	4,239.34			4,239.34
Jarvis.....	Feb., 1924	685.43			685.43
Kingsville.....	Nov., 1923	2,869.35			2,869.35
Kitchener.....	Jan., 1911	22,563.92			22,563.92
Lambeth.....	April, 1915	412.32			412.32
LaSalle.....	Nov., 1925	1,593.06			1,593.06
Leamington.....	Nov., 1923	3,517.84			3,517.84
Listowel.....	June, 1916	957.58			957.58
London.....	Jan., 1911	38,739.35			38,739.35
London Railway Commission.....	Aug., 1914	429.37			429.37
London twp.....	Jan., 1925	949.32			949.32
Long Branch.....	Jan., 1931				
Lucan.....	Feb., 1915	672.75			672.75
Lynden.....	Nov., 1915	255.75			255.75
Markham.....	April, 1920	1,481.56			1,481.56
Merlin.....	Dec., 1922	1,072.64			1,072.64
Merritton.....	Nov., 1920	1,091.52			1,091.52
Milton.....	April, 1913	841.19			841.19
Milverton.....	June, 1916		298.18	298.18	
Mimico.....	May, 1912	2,120.02			2,120.02

## SYSTEM

## N.—CREDIT OR CHARGE

supplied to it to October 31, 1930, the cash receipts and payments thereon, adjustments or charged to each municipality in respect of power supplied in the year as a credit or charge to each municipality at October 31, 1931

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1931		Accumulated amount standing as a credit or charge on October 31, 1931	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
22.07			886.15		864.08
	16.80	348.94		332.14	
12.89		871.17		884.06	
	0.87	27.25		26.38	
1.65		86.57		88.22	
18.76		872.86		891.62	
106.47		5,580.56		5,687.03	
30.07		821.78		851.85	
	7.15	306.26		331.83	
8.69		111.88		120.57	
15.95		939.74		955.69	
312.92		9,344.73		9,657.65	
4.72		163.10		167.82	
5.99		267.78		273.77	
39.05		499.38		538.43	
1.41			14.32		12.91
331.54		6,062.28		6,393.82	
69.87		1,354.91		1,424.78	
675.31			14,170.76		13,495.45
7.58			901.94		894.36
39.70		282.92		322.62	
25.11		402.39		427.50	
55.41		5,882.14		5,937.55	
1.31			89.16		87.85
	19.19	85.52			413.55
150.99		1,897.51		2,048.50	
13.83		370.77		384.60	
53.48		849.09		902.57	
375.86		28,231.29		28,607.15	
8.94		357.10		366.04	
38.25		705.67		743.92	
68.62		22.10		90.72	
20.15		317.84		337.99	
768.42		31,039.07		31,807.49	
9.27			5,517.45		5,508.18
19.86		837.82		857.68	
		601.56		601.56	
13.08		471.77		484.85	
5.52		179.07		184.59	
29.79		953.58		983.37	
22.75		130.60		153.35	
21.05			474.51		453.46
16.50			1,745.22		1,728.72
	5.29	253.60		248.31	
44.61		2,152.70		2,197.31	



## NIAGARA

Statement showing the net Credit or Charge to each Municipality in respect of power made and interest added during the year. Also the net amount credited ending October 31, 1931, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1930		Cash receipts and payments on account of such credits and charges, also adjustments made during the year	
		Credit	Charge	Credited	Charged
		\$ c.	\$ c.	\$ c.	\$ c.
Mitchell .....	Sept., 1911	1,051.55			1,051.55
Moorefield .....	Mar., 1918	99.99			99.99
Mount Brydges .....	Mar., 1915	543.98			543.98
Newbury .....	Mar., 1921		64.71	64.71	
New Hamburg .....	Mar., 1911	278.51			278.51
New Toronto .....	Feb., 1914	7,888.21			7,888.21
Niagara Falls .....	Dec., 1915		4,908.34		
Niagara-on-Lake .....	Aug., 1919	1,189.97			1,189.97
Norwich .....	May, 1912	870.31			870.31
Oil Springs .....	Feb., 1918		18.79	18.79	
Otterville .....	Feb., 1916	375.23			375.23
Palmerston .....	July, 1916	303.24			303.24
Paris .....	Feb., 1914	1,478.52			1,478.52
Parkhill .....	May, 1920	819.02			819.02
Petrolia .....	May, 1916	3,079.00			3,079.00
Plattsville .....	Dec., 1914		89.17	89.17	
Point Edward .....	Nov., 1916	2,259.39			2,259.39
Port Colborne .....	Mar., 1920		1,867.77		
Port Credit .....	Aug., 1912	1,212.12			1,212.12
Port Dalhousie .....	Nov., 1912	1,714.96			1,714.96
Port Dover .....	Dec., 1921	1,114.30			1,114.30
Port Rowan .....	Nov., 1926	28.83			28.83
Port Stanley .....	April, 1912	735.25			735.25
Preston .....	Jan., 1911	4,468.83			4,468.83
Princeton .....	Jan., 1915		147.13	147.13	
Queenston .....	Mar., 1921		116.88	116.88	
Richmond Hill .....	June, 1925	549.85			549.85
Ridgetown .....	Dec., 1915	740.20			740.20
Riverside .....	Nov., 1922	2,920.61			2,920.61
Rockwood .....	Sept., 1913	187.22			187.22
Rodney .....	Feb., 1917	237.79			237.79
St. Catharines .....	April, 1914	265.92			265.92
St. Clair Beach .....	Nov., 1922	351.14			351.14
St. George .....	Sept., 1915	653.45			653.45
St. Jacobs .....	Sept., 1917	683.77			683.77
St. Mary's .....	May, 1911	1,186.22			1,186.22
St. Thomas .....	April, 1911	11,525.62			11,525.62
Sandwich .....	Feb., 1924		204.28	204.28	
Sarnia .....	Dec., 1916	13,792.60			13,792.60
Scarboro twp. ....	Aug., 1918	12,143.18			12,143.18
Seaforth .....	Nov., 1911	1,250.46			1,250.46
Simcoe .....	Aug., 1915	3,020.79			3,020.79
Springfield .....	Aug., 1917	354.14			354.14
Stamford twp. ....	Nov., 1916	1,420.55			1,420.55
Stouffville .....	Sept., 1923	870.69			870.69

## SYSTEM

## N.—CREDIT OR CHARGE

supplied to it to October 31, 1930, the cash receipts and payments thereon, adjustments or charged to each municipality in respect of power supplied in the year as a credit or charge to each municipality at October 31, 1931

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1931		Accumulated amount standing as a credit or charge on October 31, 1931	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
20.17		422.69		442.86	
1.98			282.60		280.62
9.77		672.87		682.64	
	1.33	3.30		1.97	
5.52			229.79		224.27
131.40		5,410.94		5,542.34	
	196.33		8,561.65		13,666.32
24.33		531.35		555.68	
17.50		256.98		274.48	
	0.34		358.49		358.83
6.82		267.85		274.67	
6.01			763.28		757.27
26.09		1,665.84		1,691.93	
18.34		558.27		576.61	
62.14		2,052.36		2,114.50	
	1.68	471.95		470.27	
44.82		2,451.75		2,496.57	
	74.71	194.28			1,748.20
21.39		270.08		291.47	
31.41			137.94		106.53
22.37		386.39		408.76	
0.48		1,292.42		1,292.90	
16.57		556.12		572.69	
88.64		4,924.33		5,012.97	
	3.22	1,040.27		1,037.05	
	2.48	174.18		171.70	
11.57		1,119.86		1,131.43	
13.30		203.39		216.69	
48.65		1,240.87		1,289.52	
3.22		616.85		620.07	
3.96		46.95		50.91	
4.90			5,284.35		5,279.45
5.85		179.48		185.33	
11.68		171.10		182.78	
15.18		181.14		196.32	
23.40		3,379.27		3,402.67	
186.94		8,051.19		8,238.13	
	3.60		2,578.75		2,582.35
265.91		19,007.40		19,273.31	
247.38		8,324.53		8,571.91	
25.29		383.28		408.57	
50.32		2,992.41		3,042.73	
7.15			101.01		93.86
27.09		878.19		905.28	
19.34		549.41		568.75	

## NIAGARA

Statement showing the net Credit or Charge to each Municipality in respect of power made and interest added during the year. Also the net amount credited ending October 31, 1931, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1930		Cash receipts and payments on account of such credits and charges, also adjustments made during the year	
		Credit	Charge	Credited	Charged
		\$ c.	\$ c.	\$ c.	\$ c.
Stratford.....	Jan., 1911	17,721.23			17,721.23
Strathroy.....	Dec., 1914	2,829.49			2,829.49
Sutton.....	Aug., 1923		94.64	94.64	
Tavistock.....	Nov., 1916	355.92			355.92
Tecumseh.....	Nov., 1922	890.01			890.01
Thamesford.....	Feb., 1914	433.92			433.92
Thamesville.....	Oct., 1915	371.28			371.28
Thedford.....	May, 1922	162.06			162.06
Thorndale.....	Mar., 1914		47.74	47.74	
Thorold.....	Jan., 1921	1,985.03			1,985.03
Tilbury.....	April, 1915	1,612.71			1,612.71
Tillsonburg.....	Aug., 1911	1,663.08			1,663.08
Toronto.....	June, 1911	390,348.10			390,348.10
Toronto twp.....	Aug., 1913	3,125.69			3,125.69
Walkerville.....	Nov., 1914	18,476.47			18,476.47
Wallaceburg.....	Feb., 1915	2,889.40			2,889.40
Wardsville.....	June, 1921	133.84			133.84
Waterdown.....	Nov., 1911	700.03			700.03
Waterford.....	April, 1915	534.94			534.94
Waterloo.....	Dec., 1910	2,787.05			2,787.05
Watford.....	Sept., 1917	845.28			845.28
Welland.....	Sept., 1917	4,527.35			4,527.35
Wellesley.....	Nov., 1916	381.87			381.87
West Lorne.....	Jan., 1917		222.19		504.22
Weston.....	Jan., 1911	7,687.57			7,687.57
Wheatley.....	Feb., 1924	24.46			24.46
Windsor.....	Oct., 1914	47,911.76			47,911.76
Woodbridge.....	Dec., 1914	1,071.89			1,071.89
Woodstock.....	Jan., 1911	11,730.58			11,730.58
Wyoming.....	Nov., 1916	59.26			59.26
York East twp.....	July, 1925	13,258.13			13,258.13
York North twp.....	Nov., 1923	2,799.11			2,799.11
Zurich.....	Sept., 1917	463.68			463.68
Toronto Transportation Comm...	Jan., 1927	969.16			969.16
RURAL POWER DISTRICTS*					
Acton R.P.D.....	Feb., 1928	70.70			
Ailsa Craig R.P.D.....	Sept., 1930	3.33			
Alvinston R.P.D.....	June, 1929	73.14			
Amherstburg R.P.D.....	Nov., 1923	18,054.78			
Aylmer R.P.D.....	Nov., 1922	7,258.95			

\*For townships included in rural power districts see "Cost of Power" and "Rural Operating" statements preceding.



## SYSTEM

## N.—CREDIT OR CHARGE

supplied to it to October 31, 1903, the cash receipts and payments thereon, adjustments or charged to each municipality in respect of power supplied in the year as a credit or charge to each municipality at October 31, 1931

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1931		Accumulated amount standing as a credit or charge on October 31, 1931	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
351.51		21,687.59		22,039.10	
56.87		2,655.00		2,711.87	
	1.96	452.69		450.73	
6.55		286.86		293.41	
14.83		65.83		80.66	
7.61		337.21		344.82	
7.36		443.81		451.17	
3.16			87.09		83.93
	1.25		253.29		254.54
39.37			771.34		731.97
27.25		343.34		370.59	
27.52		667.39		694.91	
6,202.79		369,086.96		375,289.75	
52.07		1,706.72		1,758.79	
307.77		8,398.59		8,706.36	
55.10			758.48		703.38
2.23		296.31		298.54	
12.03			338.86		326.83
9.91		805.84		815.75	
44.29		3,361.44		3,405.73	
18.13		863.21		881.34	
75.41		1,918.98		1,994.39	
7.32		168.74		176.06	
	20.61		9.58		756.60
139.06		6,785.18		6,924.24	
0.48			233.01		232.53
950.36		34,606.05		35,556.41	
17.86			10.48	7.38	
230.11		7,676.40		7,906.51	
1.25		100.94		102.19	
194.69		9,066.62		9,261.31	
49.08		3,181.04		3,230.12	
8.19		334.98		343.17	
21.45		4,404.30		4,425.75	
2.83			241.40		167.87
0.13		90.70		94.16	
2.93			217.87		141.80
722.19		4,487.35		23,264.32	
290.36		2,419.22		9,968.53	

## NIAGARA

Statement showing the net Credit or Charge to each Municipality in respect of power made and interest added during the year. Also the net amount credited ending October 31, 1931, and the accumulated amount standing

Rural power district	Date commenced operating	Net credit or charge at October 31, 1930		Cash receipts and payments on account of such credits and charges, also adjustments made during the year	
		Credit	Charge	Credited	Charged
		\$ c.	\$ c.	\$ c.	\$ c.
Ayr R.P.D.	July, 1926	1,658.10			
Baden R.P.D.	Sept., 1922		560.34		
Beamsville R.P.D.	Jan., 1923	27,662.72			
Belle River R.P.D.	Dec., 1922	21,643.15			
Blenheim R.P.D.	July, 1924	9,217.11			31.36
Bond Lake R.P.D.	Mar., 1924	36,298.01			199.28
Bothwell R.P.D.	Dec., 1923	7,468.74			
Brampton R.P.D.	Nov., 1923	1,086.83			13.43
Brant R.P.D.	Oct., 1922	164.76			
Brigden R.P.D.	Jan., 1927		1,058.83		
Burford R.P.D.	Dec., 1926	2,168.24			
Caledonia R.P.D.	Oct., 1925		478.72		92.44
Chatham R.P.D.	May, 1922	10,825.47			9.09
Chippawa R.P.D.	July, 1922	1,962.56			
Clinton R.P.D.	July, 1928		981.38		
Delaware R.P.D.	Oct., 1922	5,769.55			
Dorchester R.P.D.	Dec., 1921	448.54			
Dresden R.P.D.	May, 1928	96.94			
Drumbo R.P.D.	Aug., 1922	715.68			
Dundas R.P.D.	Jan., 1922	11,828.00			
Dunnville R.P.D.	July, 1928		698.80		
Dutton R.P.D.	Feb., 1926	2,066.29			
Elmira R.P.D.	June, 1926		239.84		
Elora R.P.D.	Jan., 1926	1,028.73			
Essex R.P.D.	Nov., 1924	10,249.28			
Exeter R.P.D.	Nov., 1922	10,437.72			
Forest R.P.D.	Nov., 1926	408.99			
Galt R.P.D.	Oct., 1922	2,380.25			
Georgetown R.P.D.	Nov., 1924	3,851.28			11.97
Goderich R.P.D.	June, 1925	632.12			
Grantham R.P.D.	Nov., 1924	1,478.53			
Guelph R.P.D.	Jan., 1925		2,700.08		
Haldimand R.P.D.	Oct., 1925	3,834.33			
Harriston R.P.D.	Dec., 1929		31.81		
Harrow R.P.D.	Nov., 1923	7,430.01			
Ingersoll R.P.D.	Oct., 1922	2,729.64			
Jordan R.P.D.	May, 1922	5,204.93			
Keswick R.P.D.	Mar., 1924		4,065.73		
Kingsville R.P.D.	Nov., 1923	25,047.77			
Listowel R.P.D.	Oct., 1926	1,474.04			17.76
London R.P.D.	Nov., 1922	12,993.60			87.77
Lucan R.P.D.	June, 1926		69.13		57.53

\*For townships included in rural power districts see "Cost of Power" and "Rural Operating" statements preceding.

## SYSTEM

## N.—CREDIT OR CHARGE

supplied to it to October 31, 1930, the cash receipts and payments thereon, adjustments or charged to each municipality in respect of power supplied in the year as a credit or charge to each municipality at October 31, 1931

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1931		Accumulated amount standing as a credit or charge on October 31, 1931	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
66.32			16.20	1,708.22	
	22.41	20.38			562.37
1,106.51		6,869.31		35,638.54	
865.73		4,440.63		26,949.51	
367.94		3,586.27		13,139.96	
1,447.70		7,409.62		44,956.05	
298.75			263.53	7,503.96	
43.20		684.55		1,801.15	
6.59		420.88		592.23	
	42.35		933.42		2,034.60
86.73		1,260.29		3,515.26	
	22.54		89.64		683.34
432.75		4,750.08		15,999.21	
78.50		522.15		2,563.21	
	39.26		136.36		1,157.00
230.78			3,517.11	2,483.22	
17.94			1,301.99		835.51
3.88			52.56	48.26	
28.63		1,061.64		1,805.95	
473.12		4,566.17		16,867.29	
	27.95		567.18		1,293.93
82.65			424.10	1,724.84	
	9.59		114.90		364.33
41.15			281.12	788.76	
409.97		2,735.80		13,395.05	
417.51		1,492.03		12,347.26	
16.36		165.29		590.64	
95.21			66.97	2,408.49	
153.66			483.39	3,509.58	
25.28			389.51	267.89	
59.14			1,002.63	535.04	
	108.00		1,700.65		4,508.73
153.37		1,814.24		5,801.94	
	1.27		473.37		506.45
297.20		3,470.48		11,197.69	
109.19		1,012.46		3,851.29	
208.20		4,204.61		9,617.74	
	162.63		370.91		4,599.27
1,001.91		4,915.47		30,965.15	
58.72		135.60		1,650.60	
517.46		3,656.32		17,079.61	
	4.26	358.94		228.02	



## NIAGARA

Statement showing the net Credit or Charge to each Municipality in respect of power made and interest added during the year. Also the net amount credited ending October 31, 1931, and the accumulated amount standing

Rural power district	Date commenced operating	Net credit or charge at October 31, 1930		Cash receipts and payments on account of such credits and charges, also adjustments made during the year	
		Credit	Charge	Credited	Charged
		\$ c.	\$ c.	\$ c.	\$ c.
Lynden R.P.D.	Feb., 1922	665.87			
Markham R.P.D.	Dec., 1922	13,181.44			
Merlin R.P.D.	Nov., 1928	173.81			
Milton R.P.D.	Jan., 1925	5,814.18			197.29
Milverton R.P.D.	Aug., 1927		2,033.88		
Mitchell R.P.D.	Dec., 1925	1,321.35			
Newmarket R.P.D.	Mar., 1924	4,937.22			
Niagara R.P.D.	Jan., 1922	17,227.33			
Norwich R.P.D.	May, 1925	8,722.08			149.52
Oil Springs R.P.D.	Dec., 1925	2,510.36			
Palmerston R.P.D.	Oct., 1926		83.70		26.70
Petrolia R.P.D.	Aug., 1923		139.68		
Preston R.P.D.	April, 1922	5,452.79			200.75
Ridgetown R.P.D.	Mar., 1922	3,304.67			
St. Jacobs R.P.D.	Nov., 1922	4,021.53			
St. Marys R.P.D.	Dec., 1927		4,596.31		83.25
St. Thomas R.P.D.	Aug., 1923	8,179.30			57.64
Saltfleet R.P.D.	Feb., 1922	938.45			347.70
Sandwich R.P.D.	July, 1922	45,990.93			
Sarnia R.P.D.	June, 1923	8,134.03			
Scarboro R.P.D.	Dec., 1923	12,144.41			
Seaford R.P.D.	Nov., 1927		275.31		
Simcoe R.P.D.	Nov., 1922	2,273.48			
Stamford R.P.D.	Mar., 1922	7,974.08			
Stratford R.P.D.	July, 1924	226.28			
Strathroy R.P.D.	Dec., 1926	2,397.31			
Streetsville R.P.D.	Nov., 1922	8,250.81			
Tavistock R.P.D.	April, 1923		2,398.98		
Thamesville R.P.D.	Nov., 1927	1,739.86			
Tilbury R.P.D.	Dec., 1923	3,706.44			86.00
Tillsonburg R.P.D.	Dec., 1923	8,291.49			
Wallaceburg R.P.D.	Jan., 1923	8,134.86			9.44
Walsingham R.P.D.	Dec., 1926	556.85			
Walton R.P.D.	Nov., 1924	980.87			
Waterdown R.P.D.	Oct., 1922	20,949.05			
Waterford R.P.D.	Nov., 1923		2,824.25		
Watford R.P.D.	Dec., 1929		221.20		
Welland R.P.D.	April, 1922	28,466.33			84.60
Woodbridge R.P.D.	Jan., 1923	13,163.88			
Woodstock R.P.D.	Feb., 1922	10,965.34			
Totals		1,370,631.57	35,585.80	4,044.81	856,409.52

\*For townships included in rural power districts see "Cost of Power" and "Rural Operating" statements preceding.

SYSTEM

N.—CREDIT OR CHARGE

supplied to it to October 31, 1930, the cash receipts and payments thereon, adjustments or charged to each municipality in respect of power supplied in the year as a credit or charge to each municipality at October 31, 1931

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1931		Accumulated amount standing as a credit or charge on October 31, 1931	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
26.63		285.96		978.46	
527.26		6,491.88		20,200.58	
6.95			1,670.48		1,489.72
224.68			64.18	5,777.39	
	81.36		760.34		2,875.58
52.85		1,019.31		2,393.51	
197.49		1,107.69		6,242.40	
689.09		2,407.26		20,323.68	
345.35		858.02		9,775.93	
100.41			62.08	2,548.69	
	3.71		1,837.82		1,951.93
	5.59		85.37		230.64
212.72		3,353.25		8,818.01	
132.19		393.96		3,830.82	
160.86		494.03		4,676.42	
	183.85		1,295.48		6,158.89
325.15		6,787.25		15,234.06	
34.16			3,948.14		3,323.23
1,839.64		9,150.94		56,981.51	
325.36		2,342.31		10,801.70	
485.78		5,404.54		18,034.73	
	11.01		170.40		456.72
90.94		1,126.64		3,491.06	
318.96			249.76	8,043.28	
9.05		793.30		1,028.63	
95.89			1,637.73	855.47	
330.03		9,833.12		18,413.96	
	95.96		809.56		3,304.50
69.59			112.15	1,697.30	
146.52		491.58		4,258.54	
331.66			468.75	8,154.40	
325.04		489.83		8,940.29	
22.27		1,404.57		1,983.69	
39.23		866.04		1,886.14	
837.96		8,546.46		30,333.47	
	112.97	1,683.54			1,253.68
	8.85		48.45		278.50
1,136.38		8,470.20		37,988.31	
526.56			1,701.35	11,989.09	
437.43		959.26		12,332.33	
35,637.08	1,360.43	836,233.10	74,843.58	1,371,226.81	92,879.58

## NIAGARA SYSTEM

## Reserve for Renewals—October 31, 1931

Total provision for renewals to October 31, 1930.....	\$14,072,959.13	
Deduct:		
Expenditures to October 31, 1930.....	1,122,631.37	
Balance brought forward October 31, 1930.....		\$12,950,327.76
Added during the year ending October 31, 1931:		
Amounts charged to municipalities and rural power districts as part of the cost of power delivered to them.....	\$396,820.86	
Amounts included in costs of distribution of power within rural power districts.....	208,799.24	
Provision against equipment employed in respect of contracts with private companies which purchased power.....	285,485.15	
Reserve provided in respect of lines transferred to certain rural power districts from power properties.....	46,560.00	
Reserve provided in respect of the purchase of Barton Township distribution system (\$6,071.03) and sundry lines purchased.....	6,606.03	
Interest at 4% per annum on the monthly balances at the credit of the account.....	518,232.30	
		1,962,503.58
		<u>\$14,912,831.34</u>
Deduct:		
Provision for renewals on lines and equipment sold to sundry municipalities.....	\$17,008.75	
Expenditures during the year ending October 31, 1931.....	108,806.70	
		125,815.45
Balance carried forward October 31, 1931.....		<u><u>\$14,787,015.89</u></u>

## NIAGARA SYSTEM

## Reserve for Obsolescence and Contingencies—October 31, 1931

Balance brought forward October 31, 1930.....	\$13,568,525.83	
Added during the year ending October 31, 1931:		
Amounts charged to municipalities and rural power districts as part of the cost of power delivered to them.....	\$380,886.01	
Amounts included in the costs of distribution of power within rural power districts.....	104,399.62	
Provision against equipment employed in respect of contracts with private customers which purchased power.....	132,534.66	
Interest at 4% per annum on monthly balances at the credit of the account.....	542,741.03	
		1,160,561.32
		<u>\$14,729,087.15</u>
Deduct:		
Contingencies met with during the year ending October 31, 1931.....	99,508.89	
Balance carried forward October 31, 1931.....		<u><u>\$14,629,578.26</u></u>



## NIAGARA SYSTEM

## SINKING FUND

Statement showing Sinking Fund paid by each Municipality in the periods mentioned hereunder as part of the cost of power delivered thereto, together with its proportionate share of other sinking funds provided out of other revenues of the system and interest allowed thereon to October 31, 1931

Municipality	Period of years ending Oct. 31, 1931	Amount	Municipality	Period of years ending Oct. 31, 1931	Amount
		\$ c.			\$ c.
Acton.....	14 years	26,638.12	Elmira.....	13 years	38,848.19
Agincourt.....	7 "	3,690.99	Elora.....	12 "	18,607.91
Ailsa Craig.....	11 "	7,817.08	Embro.....	12 "	5,300.72
Alvinston.....	8 "	7,586.70	Erieau.....	8 "	2,031.91
Amherstburg.....	14 "	20,992.59	Erie Beach.....	7 "	542.42
Ancaster twp.....	8 "	6,125.96	Essex.....	8 "	12,074.22
Arkona.....	5 "	2,012.34	Etobicoke twp.....	9 "	67,607.21
Aylmer.....	8 "	17,901.04	Exeter.....	10 "	18,569.49
Ayr.....	12 "	6,421.30	Fergus.....	12 "	21,767.32
Baden.....	14 "	16,044.33	Fonthill.....	6 "	1,910.76
Beachville.....	14 "	19,289.25	Forest.....	9 "	12,750.43
Belle River.....	9 "	3,923.04	Galt.....	15 "	255,978.78
Blenheim.....	11 "	16,978.28	Georgetown.....	13 "	44,271.77
Blyth.....	8 "	3,676.77	Glencoe.....	8 "	8,247.49
Bolton.....	11 "	8,878.96	Goderich.....	12 "	56,926.13
Bothwell.....	11 "	9,478.92	Granton.....	10 "	3,885.20
Brampton.....	15 "	73,804.62	Guelph.....	15 "	298,188.39
Brantford.....	12 "	373,173.29	Hagersville.....	13 "	39,188.12
Brantford twp.....	8 "	11,212.02	Hamilton.....	15 "	1,561,044.41
Bridgeport.....	4 "	1,540.59	Harriston.....	10 "	15,267.24
Brigden.....	9 "	5,662.74	Harrow.....	8 "	7,819.94
Brussels.....	8 "	5,319.78	Hensall.....	10 "	6,605.34
Burford.....	11 "	6,134.36	Hespeler.....	15 "	42,369.55
Burgessville.....	10 "	2,531.45	Highgate.....	10 "	4,891.18
Caledonia.....	14 "	9,702.73	Humberstone.....	8 "	7,090.12
Campbellville.....	7 "	601.38	Ingersoll.....	15 "	84,616.91
Cayuga.....	7 "	3,382.41	Jarvis.....	8 "	5,890.74
Chatham.....	11 "	180,699.00	Kingsville.....	8 "	16,471.37
Chippawa.....	9 "	7,852.98	Kitchener.....	15 "	565,714.79
Clifford.....	8 "	2,505.97	Lambeth.....	11 "	4,158.97
Clinton.....	12 "	21,193.98	LaSalle.....	6 "	4,888.00
Comber.....	11 "	9,281.87	Leamington.....	8 "	27,929.24
Cottam.....	5 "	1,260.31	Listowel.....	10 "	31,878.42
Courtright.....	8 "	2,316.94	London.....	15 "	1,016,783.11
Dashwood.....	9 "	4,011.92	London Ry. Comm..	12 "	70,725.38
Delaware.....	11 "	1,246.88	London twp.....	7 "	5,277.04
Dorchester.....	12 "	3,152.32	Long Branch.....	1 "	1,693.80
Drayton.....	8 "	5,294.43	Lucan.....	11 "	9,502.84
Dresden.....	11 "	14,302.63	Lynden.....	11 "	7,232.55
Drumbo.....	12 "	2,885.89	Markham.....	8 "	6,930.73
Dublin.....	9 "	2,705.54	Merlin.....	8 "	5,881.81
Dundas.....	15 "	67,946.80	Merritton.....	10 "	34,523.09
Dunnville.....	8 "	24,568.48	Milton.....	13 "	53,576.85
Dutton.....	11 "	8,836.61	Milverton.....	10 "	23,298.17
East Windsor.....	9 "	99,513.31	Mimico.....	14 "	57,608.49

## NIAGARA SYSTEM

## SINKING FUND

Statement showing Sinking Fund paid by each Municipality in the periods mentioned hereunder as part of the cost of power delivered thereto, together with its proportionate share of other sinking funds provided out of other revenues of the system and interest allowed thereon to October 31, 1931

Municipality	Period of years ending Oct. 31, 1931	Amount	Municipality	Period of years ending Oct. 31, 1931	Amount
		\$ c.			\$ c.
Mitchell.....	15 years	20,346.08	Stratford.....	15 years	273,373.55
Moorefield.....	8 "	2,830.90	Strathroy.....	12 "	38,031.17
Mount Brydges.....	11 "	3,034.90	Sutton.....	8 "	4,974.32
Newbury.....	8 "	1,878.28	Tavistock.....	10 "	19,110.50
New Hamburg.....	15 "	23,652.19	Tecumseh.....	9 "	9,891.42
New Toronto.....	12 "	186,665.92	Thamesford.....	12 "	7,786.57
Niagara Falls.....	11 "	258,025.19	Thamesville.....	11 "	7,653.35
Niagara-on-Lake.....	8 "	12,559.20	Thedford.....	8 "	3,699.82
Norwich.....	14 "	17,626.88	Thorndale.....	12 "	4,294.94
Oil Springs.....	8 "	12,165.18	Thorold.....	9 "	32,733.02
Otterville.....	10 "	3,606.24	Tilbury.....	11 "	19,803.88
Palmerston.....	10 "	19,083.01	Tillsonburg.....	15 "	38,814.94
Paris.....	12 "	53,319.39	Toronto.....	15 "	8,036,704.72
Parkhill.....	8 "	7,912.41	Toronto twp.....	13 "	35,561.66
Petrolia.....	10 "	47,049.97	Walkerville.....	12 "	284,578.64
Plattsville.....	12 "	4,145.21	Wallaceburg.....	11 "	83,020.16
Point Edward.....	9 "	20,045.75	Wardsville.....	8 "	1,402.10
Port Colborne.....	10 "	37,787.73	Waterdown.....	15 "	10,962.64
Port Credit.....	14 "	14,974.51	Waterford.....	11 "	13,745.91
Port Dalhousie.....	10 "	12,693.36	Waterloo.....	15 "	115,048.97
Port Dover.....	8 "	9,413.45	Watford.....	9 "	9,067.10
Port Rowan.....	5 "	2,397.19	Welland.....	9 "	117,727.06
Port Stanley.....	14 "	17,795.02	Wellesley.....	10 "	8,224.74
Preston.....	15 "	128,864.76	West Lorne.....	10 "	14,672.33
Princeton.....	12 "	3,277.97	Weston.....	15 "	102,006.43
Queenston.....	8 "	2,967.86	Wheatley.....	8 "	4,560.55
Richmond Hill.....	7 "	5,710.98	Windsor.....	12 "	843,083.61
Ridgetown.....	11 "	18,432.51	Woodbridge.....	12 "	12,839.64
Riverside.....	9 "	31,726.76	Woodstock.....	15 "	166,524.54
Rockwood.....	13 "	5,115.19	Wyoming.....	10 "	3,538.44
Rodney.....	9 "	5,300.11	York East twp.....	7 "	79,123.33
St. Catharines.....	10 "	229,011.38	York North twp.....	8 "	29,587.91
St. Clair Beach.....	9 "	2,710.18	Zurich.....	9 "	6,127.15
St. George.....	11 "	6,077.42	Sandwich, Windsor & Amherstburg Ry. Co.	9 "	75,784.57
St. Jacobs.....	9 "	6,343.61	Toronto Trans. Com. (Radial Railways).	10 "	118,028.29
St. Marys.....	15 "	62,168.88	Windsor, Essex & Lake Shore Ry. Co.	2 "	5,774.66
St. Thomas.....	15 "	212,411.29			
Sandwich.....	8 "	96,295.06			
Sarnia.....	10 "	255,189.01			
Scarboro twp.....	8 "	60,347.94			
Seaforth.....	15 "	31,444.96			
Simcoe.....	11 "	36,625.50			
Springfield.....	9 "	4,259.90			
Stamford twp.....	10 "	36,505.83			
Stouffville.....	8 "	5,688.12			

## NIAGARA SYSTEM

## SINKING FUND

Statement showing Sinking Fund paid by each Municipality in the periods mentioned hereunder as part of the cost of power delivered thereto, together with its proportionate share of other sinking funds provided out of other revenues of the system and interest allowed thereon to October 31, 1931

Rural power district	Period of years ending Oct. 31, 1931	Amount	Rural power district	Period of years ending Oct. 31, 1931	Amount
		\$ c.			\$ c.
Acton R.P.D.	4 years	159.76	London R.P.D.	9 years	37,154.25
Ailsa Craig R.P.D.	2 "	20.35	Lucan R.P.D.	6 "	2,118.17
Alvinston R.P.D.	3 "	79.76	Lynden R.P.D.	10 "	5,785.21
Amherstburg R.P.D.	8 "	18,541.86	Markham R.P.D.	9 "	8,743.35
Aylmer R.P.D.	10 "	8,242.88	Merlin R.P.D.	3 "	2,893.87
Ayr R.P.D.	6 "	851.89	Milton R.P.D.	7 "	3,005.72
Baden R.P.D.	10 "	7,671.63	Milverton R.P.D.	5 "	1,263.64
Beamsville R.P.D.	9 "	24,746.47	Mitchell R.P.D.	6 "	4,450.33
Belle River R.P.D.	9 "	8,842.87	Newmarket R.P.D.	8 "	5,774.97
Blenheim R.P.D.	8 "	3,970.00	Niagara R.P.D.	10 "	14,455.49
Bond Lake R.P.D.	8 "	17,170.50	Norwich R.P.D.	7 "	12,182.62
Bothwell R.P.D.	8 "	3,779.04	Oil Springs R.P.D.	6 "	1,664.18
Brampton R.P.D.	8 "	2,850.51	Palmerston R.P.D.	5 "	459.05
Brant R.P.D.	10 "	10,261.67	Petrolia R.P.D.	9 "	759.32
Brigden R.P.D.	5 "	1,602.55	Preston R.P.D.	10 "	22,786.15
Burford R.P.D.	5 "	2,597.43	Ridgetown R.P.D.	10 "	11,020.90
Caledonia R.P.D.	7 "	5,123.72	St. Jacobs R.P.D.	9 "	7,113.64
Chatham R.P.D.	10 "	12,437.73	St. Marys R.P.D.	4 "	4,573.52
Chippawa R.P.D.	10 "	4,752.70	St. Thomas R.P.D.	9 "	15,624.44
Clinton R.P.D.	4 "	2,518.95	Saltfleet R.P.D.	10 "	27,264.31
Delaware R.P.D.	9 "	9,616.04	Sandwich R.P.D.	10 "	33,140.21
Dorchester R.P.D.	10 "	14,488.04	Sarnia R.P.D.	9 "	15,345.01
Dresden R.P.D.	4 "	414.15	Scarboro R.P.D.	8 "	5,785.91
Drumbo R.P.D.	10 "	3,942.53	Seaforth R.P.D.	4 "	1,077.89
Dundas R.P.D.	10 "	13,005.38	Simcoe R.P.D.	9 "	4,145.97
Dunnville R.P.D.	4 "	293.48	Stamford R.P.D.	10 "	4,108.32
Dutton R.P.D.	6 "	1,935.51	Stratford R.P.D.	8 "	6,171.93
Elmira R.P.D.	6 "	870.18	Strathroy R.P.D.	5 "	1,639.74
Elora R.P.D.	6 "	3,042.24	Streetsville R.P.D.	9 "	8,265.54
Essex R.P.D.	7 "	6,518.55	Tavistock R.P.D.	9 "	4,481.39
Exeter R.P.D.	9 "	8,334.19	Thamesville R.P.D.	4 "	2,084.33
Forest R.P.D.	5 "	627.31	Tilbury R.P.D.	8 "	2,750.24
Galt R.P.D.	10 "	3,872.39	Tillsonburg R.P.D.	8 "	14,377.61
Georgetown R.P.D.	7 "	2,636.77	Wallaceburg R.P.D.	9 "	8,208.05
Goderich R.P.D.	7 "	2,049.59	Walsingham R.P.D.	5 "	2,935.37
Grantham R.P.D.	7 "	14,549.63	Walton R.P.D.	7 "	2,390.14
Guelph R.P.D.	7 "	5,243.31	Waterdown R.P.D.	9 "	10,359.28
Haldimand R.P.D.	7 "	2,689.94	Waterford R.P.D.	8 "	3,360.46
Harriston R.P.D.	2 "	185.26	Watford R.P.D.	2 "	278.20
Harrow R.P.D.	8 "	7,236.61	Welland R.P.D.	10 "	36,984.71
Ingersoll R.P.D.	10 "	7,488.55	Woodbridge R.P.D.	9 "	19,122.80
Jordan R.P.D.	10 "	5,095.27	Woodstock R.P.D.	10 "	17,205.94
Keswick R.P.D.	8 "	8,654.63			\$19,068,293.89
Kingsville R.P.D.	8 "	23,512.97			
Listowel R.P.D.	5 "	2,610.68			

\*For townships included in rural power districts see "Cost of Power" and "Rural Operating" statements preceding.



# NIAGARA SYSTEM

## Reserve for Sinking Fund—October 31, 1931

Total provision for sinking fund to October 31, 1930.....	\$16,534,198.80	
Provided in the year ending October 31, 1931, in respect of:		
Advances by the Province for construction of transmission lines and stations.....	\$489,332.78	
Advances by the Province for construction of rural power districts.....	55,496.81	
Advances by the Province for construction of pipe line to Ontario Power generating station.....	36,923.85	
Advances by the Province for construction of Queenston-Chippawa development.....	809,246.02	
Bonds issued and assumed by the Commission in connection with the purchase of the properties of the Ontario Power Company, Toronto Power Company, Essex system and Thorold system.....	481,727.68	
Interest at 4% per annum on amounts standing at the credit of the reserve accounts.....	661,367.95	
		2,534,095.09
		<u>\$19,068,293.89</u>

### NIAGARA SYSTEM—RURAL LINES

Statement showing Interest, Sinking Fund, Renewals and Contingencies charged by the Commission to the Municipalities which operate the respective Rural Lines, for the year ending October 31, 1931

Operated by	Capital cost	Interest	Sinking fund	Renewals	Contingencies	Total interest, sinking fund, renewals and contingencies charged
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Milton.....	15,909.84	789.13	286.38	318.20	159.10	1,552.81
Welland.....	19,617.60	823.94	353.12	392.35	196.18	1,765.59
Totals.....	35,527.44	1,613.07	639.50	710.55	355.28	3,318.40

### NIAGARA RURAL LINES

Statement showing the total Sinking Fund paid in respect of each line together with interest allowed thereon to October 31, 1931

Lines operated by	Period of years ending October 31, 1931	Amount
Milton.....	18 years	\$ c. 2,633.51
Welland.....	19 "	9,146.76
Total.....	.....	11,780.27

GEORGIAN BAY

Operating Account for Year

COSTS OF OPERATION AS PROVIDED FOR UNDER THE TERMS OF THE POWER COMMISSION ACT	
Power purchased.....	\$64,410.77
Costs of operation and maintenance, including the proportion of administrative expenses chargeable to the operation of the system:	
Generation and transmission equipment.....	\$401,005.26
Rural power districts.....	37,935.44
	438,941.70
Interest on capital investment in:	
Generation and transmission equipment.....	\$332,818.63
Rural power districts.....	23,837.08
	356,655.71
Provision for renewal of:	
Generation and transmission equipment.....	\$101,674.16
Rural power districts.....	20,126.72
	121,800.88
Provision for obsolescence and contingencies in respect of:	
Generation and transmission equipment.....	\$27,701.04
Rural power districts.....	20,126.72
	47,827.76
Provision for sinking fund:	
By charges included in the cost of power delivered to municipalities and rural power districts.....	\$69,529.02
By charges against contracts with private companies which purchase power.....	8,675.41
By charges included in the cost of distribution of power within rural power districts.....	5,584.70
	83,789.13
	<u>\$1,113,425.95</u>

GEORGIAN BAY

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such cost; upon ascertainment (by annual adjustment) of the actual cost

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system on which interest and fixed charges are payable	Average horsepower supplied in year after correction for power factor	Cost of power purchased	Share of operating	
						Operating main-tenance and adminis-trative expenses	Interest
	To Jan. 1 1931	To Oct. 31 1931					
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
Alliston.....		60.00	89,634.00	198.2	544.71	3,944.10	3,978.34
Arthur.....		75.00	68,531.22	117.2	322.10	3,246.81	3,032.84
Barrie.....	30.00	32.00	601,078.20	2,277.9	6,260.32	29,603.44	26,706.97
Beaverton.....		37.00	77,957.50	259.0	711.82	4,669.29	3,273.97
Beeton.....	80.00	75.00	69,707.33	125.0	343.54	3,029.38	3,082.11
Bradford.....		65.00	70,784.50	132.2	363.32	3,315.72	3,137.51
Brechin.....	50.00	55.00	19,265.77	49.1	134.94	1,214.38	843.52
Cannington.....		40.00	45,855.85	150.4	413.34	2,799.58	2,017.14
Chatsworth.....		45.00	16,019.36	50.3	138.24	909.64	708.85
Chesley.....		43.00	130,467.28	474.3	1,303.51	6,659.51	5,771.34
Coldwater.....		36.00	64,011.24	224.5	616.99	3,151.97	2,840.56
Collingwood.....		40.00	402,808.65	1,340.5	3,684.08	20,382.47	17,675.49
Cookstown.....	55.00	60.00	19,859.10	48.2	132.47	1,046.49	880.17
Creemore.....		55.00	43,372.41	98.9	271.81	2,141.60	1,801.92
Dundalk.....		37.00	44,686.27	157.2	432.03	2,681.20	1,977.03



SYSTEM

ending October 31st, 1931

REVENUE FOR PERIOD	
Collected from municipalities.....	\$767,915.89
Power sold to private companies.....	111,940.05
Collected from customers in rural power districts.....	170,968.00
	<u>\$1,050,823.94</u>
Add:	
Amounts due by certain municipalities, being the difference between the sums paid and the cost of power supplied to them in the year.....	\$62,263.91
Amounts due by municipalities comprising certain rural power districts, being the difference between the revenue collected from customers therein and the cost of power supplied to them in the year.....	19,333.31
	<u>81,597.22</u>
	<u>\$1,132,421.16</u>
Deduct:	
Amounts collected from certain municipalities in excess of the sums required to be paid by them for power supplied in the year.....	\$14,892.58
Amounts collected from customers in certain rural power districts in excess of the cost of power delivered thereto.....	4,102.63
	<u>18,995.21</u>
Revenue.....	<u>\$1,113,425.95</u>
	<u>\$1,113,425.95</u>

SYSTEM

G.B.—COST OF POWER

the Power Commission Act—of Power supplied to it by the Commission; the amount and the amount remaining to be credited or charged to each Municipality of power supplied to it in the year ending October 31, 1931

costs and fixed charges			Cost in excess of revenue from power sold to private companies	Total cost of power for year as provided to be paid under Power Commission Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment	
Renewals	Obsolescence and contingencies	Sinking fund				Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,403.35	298.10	941.83	172.98	11,283.41	11,889.50	606.09	.....
1,140.50	222.20	720.49	102.29	8,787.23	8,791.22	3.99	.....
7,572.26	2,280.72	6,319.51	1,988.06	80,731.28	72,117.51	.....	8,613.77
975.36	273.74	778.76	226.05	10,908.99	9,582.97	.....	1,326.02
1,143.28	221.72	729.95	109.10	8,659.08	9,482.07	822.99	.....
1,155.73	235.63	743.87	115.38	9,067.16	8,594.59	.....	472.57
288.84	70.52	202.35	42.85	2,797.40	2,654.47	.....	142.93
621.59	170.17	481.29	131.26	6,634.37	6,014.97	.....	619.40
221.48	64.12	168.12	43.90	2,254.35	2,261.97	7.62	.....
1,677.36	499.18	1,368.84	413.95	17,693.69	20,392.74	2,699.05	.....
839.10	249.35	671.69	195.93	8,565.59	8,082.30	.....	483.29
5,406.19	1,488.68	4,219.11	1,169.94	54,025.96	53,619.29	.....	406.67
302.39	73.53	208.57	42.07	2,685.69	2,855.74	170.05	.....
621.14	140.45	428.31	86.32	5,491.55	5,440.83	.....	50.72
584.84	170.06	468.90	137.20	6,451.26	5,818.04	.....	633.22

## GEORGIAN BAY

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such cost; upon ascertainment (by annual adjustment) of the actual cost of

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system on which interest and fixed charges are payable	Average horse- power supplied in year after cor- rection for power factor	Cost of power pur- chased	Share of operating	
	To Jan. 1 1931	To Oct. 31 1931				Operating main- tenance and adminis- trative expenses	Interest
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
Durham.....		33. 00	127,282. 22	441. 7	1,213. 92	7,364. 57	5,630. 07
Elmvale.....	36. 00	38. 00	45,207. 81	157. 1	431. 76	2,865. 54	1,986. 94
Elmwood.....		48. 00	16,205. 53	50. 8	139. 61	1,306. 34	718. 76
Flesherton.....		43. 00	27,399. 50	84. 5	232. 23	1,500. 56	1,213. 85
Grand Valley.....		58. 00	47,653. 99	106. 6	292. 97	2,321. 65	2,112. 00
Gravenhurst.....		24. 00	71,339. 54	567. 0		7,568. 17	3,165. 86
Hanover.....	37. 00	35. 00	261,806. 86	1,011. 9	2,780. 99	12,750. 05	11,538. 20
Holstein.....		90. 00	14,422. 27	16. 7	45. 90	775. 66	639. 33
Huntsville.....	27. 00	26. 00	155,741. 88	974. 6		13,495. 51	6,919. 15
Kincardine.....		60. 00	168,441. 89	383. 6	1,054. 24	7,211. 58	7,489. 19
Kirkfield.....		60. 00	13,331. 96	28. 2	77. 50	530. 14	592. 35
Lucknow.....		65. 00	90,399. 75	195. 1	536. 19	4,225. 70	4,021. 93
Markdale.....		36. 00	40,751. 15	143. 4	394. 10	2,169. 40	1,805. 58
Meaford.....		40. 00	133,525. 51	372. 4	1,023. 46	5,943. 64	5,942. 27
Midland.....	25. 00	30. 00	709,993. 93	2,750. 4	7,558. 89	35,422. 12	31,273. 30
Mount Forest.....		40. 00	120,548. 63	332. 2	912. 98	5,855. 88	5,340. 09
Muskoka twp.....			10,143. 94	22. 1	60. 74	451. 08	451. 79
Neustadt.....		70. 00	31,764. 63	36. 3	99. 76	857. 06	1,403. 67
Orangeville.....		45. 00	185,028. 27	518. 7	1,425. 54	8,480. 66	7,971. 61
Owen Sound.....		30. 00	844,154. 41	3,208. 8	8,818. 70	41,031. 45	37,419. 77
Paisley.....		58. 00	65,899. 01	127. 2	349. 58	2,501. 63	2,146. 07
Penetanguishene.....		35. 00	175,058. 08	580. 3	1,594. 83	8,534. 17	7,689. 88
Port Elgin.....		40. 00	39,013. 15	125. 8	345. 73	2,424. 64	1,579. 86
Port McNicoll.....		33. 00	25,762. 11	92. 6	254. 49	1,347. 94	1,141. 12
Port Perry.....		50. 00	81,716. 05	207. 2	569. 45	3,641. 21	3,637. 53
Priceville.....		85. 00	7,954. 70	14. 4	39. 58	463. 82	353. 94
Ripley.....		80. 00	30,752. 13	50. 9	139. 88	1,434. 45	1,365. 54
Rosseau.....		127. 00	21,844. 62	10. 7	29. 42	651. 75	546. 60
Shelburne.....		41. 00	68,799. 35	214. 3	588. 96	3,988. 09	3,040. 98
Southampton.....		40. 00	48,322. 88	175. 2	481. 50	2,883. 48	2,048. 51
Stayner.....		44. 00	60,715. 17	193. 1	530. 69	3,228. 02	2,538. 17
Sunderland.....		55. 00	26,088. 85	60. 3	165. 72	1,509. 15	1,143. 75
Tara.....	80. 00	55. 00	25,477. 42	70. 6	194. 03	1,303. 64	1,122. 91
Teeswater.....		58. 00	45,167. 10	102. 5	281. 70	2,259. 86	2,000. 77
Thornton.....	90. 00	85. 00	12,015. 33	22. 4	61. 56	774. 54	531. 87
Tottenham.....		95. 00	42,611. 53	59. 9	164. 62	1,846. 75	1,891. 29
Uxbridge.....		55. 00	80,931. 52	192. 8	529. 87	3,336. 62	3,601. 26
Victoria Harbor.....		40. 00	22,695. 19	70. 2	192. 93	1,319. 34	1,002. 49
Walkerton.....		35. 00	85,155. 14	319. 5	878. 08	4,906. 63	3,810. 08
Waubauskene.....	40. 00	43. 00	13,734. 28	47. 0	129. 17	909. 19	607. 11
Warton.....		75. 00	54,933. 27	104. 4	286. 92	2,602. 29	1,869. 20
Windermere.....	140. 00	100. 00	21,853. 01	29. 3	80. 52	1,202. 15	968. 13
Wingham.....		60. 00	141,932. 57	299. 4	822. 84	5,932. 14	6,291. 46
Woodville.....		53. 00	23,730. 71	56. 3	154. 73	1,204. 05	1,037. 44

## SYSTEM

## G.B.—COST OF POWER

the Power Commission Act—of Power supplied to it by the Commission; the amount and the amount remaining to be credited or charged to each Municipality power supplied to it in the year ending October 31, 1931

costs and fixed charges			Cost in excess of revenue from power sold to private companies	Total cost of power for year as provided to be paid under Power Commission Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment	
Renewals	Obsolescence and contingencies	Sinking fund				Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,677.74	482.64	1,335.65	385.50	18,090.09	14,576.10		3,513.99
594.99	175.12	474.14	137.11	6,665.60	5,909.90		755.70
224.30	66.34	170.12	44.34	2,669.81	2,440.40		229.41
352.74	100.28	287.63	73.75	3,761.04	3,631.66		129.38
743.78	163.80	500.76	93.04	6,228.00	6,180.83		47.17
784.63	311.21	751.21	494.86	13,075.94	13,607.00	531.06	
3,247.81	1,033.35	2,746.22	883.15	34,979.77	35,802.29	822.52	
255.64	42.30	151.69	14.58	1,925.10	1,498.50		426.60
1,986.51	602.97	1,648.78	850.59	25,503.51	25,511.05	7.54	
2,615.10	563.08	1,769.67	334.79	21,037.65	23,013.56	1,975.85	
211.70	45.01	140.34	24.61	1,621.65	1,694.00	72.35	
1,424.64	304.73	949.87	170.28	11,633.34	12,681.47	1,048.13	
502.13	151.35	427.31	125.15	5,575.02	5,161.80		413.22
1,938.77	473.36	1,402.12	325.02	17,048.64	14,895.30		2,153.34
8,789.10	2,607.24	7,444.04	2,400.40	95,495.09	80,439.77		15,055.32
1,758.22	419.00	1,265.90	289.93	15,842.00	13,289.06		2,552.94
158.70	33.99	106.20	19.29	1,281.79	1,301.44	19.65	
563.96	93.00	334.10	31.68	3,383.23	2,477.37		905.86
2,572.36	630.71	1,885.53	452.70	23,419.11	23,340.96		78.15
10,573.66	3,141.34	8,853.04	2,800.52	112,638.48	96,263.10		16,375.38
715.72	167.55	507.08	111.02	6,498.65	7,376.59	877.94	
2,359.55	641.05	1,836.58	506.46	23,162.52	20,308.81		2,853.71
458.88	133.75	370.43	109.79	5,423.08	5,030.64		392.44
333.19	100.16	270.25	80.82	3,527.97	3,054.38		473.59
1,227.66	275.93	858.55	180.84	10,391.17	10,357.85		33.32
130.78	35.36	83.61	12.57	1,119.66	1,220.43	100.77	
515.02	97.42	323.28	44.42	3,920.01	4,067.97	147.96	
222.60	37.29	128.16	9.34	1,625.16	1,356.63		268.53
953.78	259.38	721.62	187.03	9,739.84	8,785.17		954.67
571.50	176.84	480.31	152.91	6,795.05	7,006.97	211.92	
768.70	216.22	602.47	168.53	8,052.80	8,497.58	444.78	
403.30	88.89	274.09	52.63	3,637.53	3,315.07		322.46
370.70	97.64	267.47	61.62	3,418.01	4,202.31	784.30	
701.93	173.26	474.53	89.46	5,981.51	5,945.92		35.59
196.25	43.48	126.27	19.55	1,753.52	1,921.37	167.85	
734.56	132.82	448.09	52.28	5,270.41	5,751.20	480.79	
1,240.22	274.70	850.40	168.27	10,001.34	10,601.19	599.85	
315.93	85.03	238.23	61.27	3,216.22	2,807.96		408.26
1,004.12	324.02	893.34	278.85	12,095.12	11,183.64		911.48
182.33	56.03	144.13	41.02	2,068.98	1,999.50		69.48
629.36	138.43	438.27	91.12	6,055.59	7,833.12	1,777.53	
374.37	73.59	227.11	25.57	2,951.44	3,032.46	81.02	
2,248.56	484.25	1,490.47	261.30	17,531.02	17,962.00	430.98	
363.99	80.11	249.29	49.14	3,138.75	2,983.42		155.33



## GEORGIAN BAY

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such cost; upon ascertainment (by annual adjustment) of the actual cost of

Rural Power District	Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Cost of power purchased	Share of operating	
				Operating maintenance and administrative expenses	Interest
RURAL POWER DISTRICT	\$ c.		\$ c.	\$ c.	\$ c.
<b>Alliston</b> R.P.D.—Tossorontio, Essa, and Tecumseth twps. ....	27,566.18	73.2	201.17	1,192.44	1,230.04
<b>Arthur</b> R.P.D.—Luther E. and Luther W. twps. ....	1,296.40	2.9	7.97	56.43	58.03
<b>Bala</b> R.P.D.—Wood and Medora twps. ....	16,060.80	60.8	167.10	807.11	717.19
<b>Barrie</b> R.P.D.—Vespra, Oro and Innisfil twps. ....	70,809.13	208.3	572.48	3,480.69	2,997.14
<b>Beaumaris</b> R.P.D.—Wood, Medora, Mouck and Macaulay twps. ....	38,233.71	123.8	340.24	2,291.54	1,690.71
<b>Beaverton</b> R.P.D.—Mara and Thorah twps. ....	2,429.71	6.0	16.49	143.28	108.80
<b>Bradford</b> R.P.D.—King, Tecumseh and Gwillimbury W. twps. ....	3,212.63	6.0	16.49	135.58	143.79
<b>Bruce</b> R.P.D.—Saugeen, Greenock, Carrick and Brant twps. ....	5,544.70	4.2	11.54	180.66	65.71
<b>Buckskin</b> R.P.D.—Matchedash, Wood and Medora twps. ....	6,069.16	15.8	43.42	280.61	270.68
<b>Cannington No. 1</b> R.P.D.—Brock, Eldon and Mariposa twps. ....	5,684.57	17.2	47.27	285.07	250.54
<b>Cannington No. 2</b> R.P.D.—Brock twp. ....	7,145.23	22.0	60.46	371.63	314.66
<b>Chatsworth</b> R.P.D.—Holland twp. ...	4,158.95	9.7	26.66	210.60	185.86
<b>Cookstown</b> R.P.D.—Essa and Innisfil twps. ....	288.43	0.7	1.92	13.58	12.94
<b>Creemore</b> R.P.D.—Nottawasaga and Osprey twps. ....	6,145.14	19.5	53.59	291.43	260.09
<b>Elmvale</b> R.P.D.—Flos, Medonte, Vespra and Oro twps. ....	19,776.58	60.3	165.72	1,107.11	877.25
<b>Flesherton</b> R.P.D.—Artemesia twp. ...	1,895.23	4.9	13.47	197.46	83.33
<b>Georgina</b> R.P.D.—Georgina and Brock twps. ....	12,195.58	39.4	108.28	827.98	516.28
<b>Hawkestone</b> R.P.D.—Oro and Orillia twps. ....	613.46	.....	1,028.94	49.11	27.14
<b>Huntsville</b> R.P.D.—Franklin, Bruuel and Chaffey twps. ....	5,257.64	10.7	29.42	241.51	162.46
<b>Innisfil</b> R.P.D.—Innisfil and Gwillimbury W. twps. ....	57,611.04	136.2	374.32	2,508.98	2,573.77
<b>Mariposa</b> R.P.D.—Reach, Mariposa and Brock twps. ....	43,588.13	131.0	360.03	2,005.97	1,932.78
<b>Markdale</b> R.P.D.—Artemesia and Glenelg twps. ....	393.26	1.6	4.40	20.01	16.33
<b>Medonte</b> R.P.D.—Tay twp. ....	2,103.97	7.2	19.79	128.82	94.09
<b>Midland</b> R.P.D.—Tiny and Tay twps. ....	4,660.12	18.3	50.29	283.04	208.37
<b>Nottawasaga</b> R.P.D.—Nottawasaga twp. ....	8,862.92	27.9	76.68	530.91	387.47

## SYSTEM

## G.B.—COST OF POWER

the Power Commission Act—of Power supplied to it by the Commission; the amount and the amount remaining to be credited or charged to each Municipality power supplied to it in the year ending October 31, 1931

costs and fixed charges			Cost in excess of revenue from power sold to private companies	Total cost of power for year as provided to be paid under Power Commission Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment	
Renewals	Obsolescence and contingencies	Sinking fund				Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
406.07	96.26	288.75	63.89	3,478.62	3,478.62	see page	219
20.23	4.47	13.62	2.53	163.28	163.28	"	"
197.20	61.54	168.48	53.06	2,171.68	2,171.68	"	"
934.12	266.86	705.13	181.80	9,138.22	9,138.22	"	"
514.83	154.29	397.84	108.05	5,497.50	5,497.50	"	"
36.81	8.81	25.53	5.24	344.96	344.96	"	"
52.45	10.69	33.76	5.24	398.00	398.00	"	"
21.03	5.36	15.41	3.65	303.36	303.36	"	"
90.34	26.10	63.74	13.79	788.68	788.68	"	"
79.89	20.56	59.68	15.01	758.02	758.02	"	"
99.68	26.08	75.01	19.20	966.72	966.72	"	"
64.11	17.86	43.68	8.47	557.24	557.24	"	"
4.40	1.07	3.03	0.61	37.55	37.55	"	"
77.89	21.87	60.98	17.02	782.87	782.87	"	"
274.43	80.33	206.24	52.63	2,763.71	2,763.71	"	"
26.59	7.35	19.91	4.28	352.39	352.39	"	"
155.10	43.32	122.01	34.39	1,807.36	1,807.36	"	"
12.27	3.07	6.46	.....	1,126.99	1,126.99	"	"
51.54	13.89	38.09	9.34	546.25	546.25	"	"
884.39	208.40	605.11	118.87	7,273.84	7,273.84	"	"
614.36	158.33	457.61	114.33	5,643.41	5,643.41	"	"
4.38	1.53	4.12	1.40	52.17	52.17	"	"
27.93	8.57	22.08	6.28	307.56	307.56	"	"
57.20	17.12	48.86	15.97	680.85	680.85	"	"
122.11	33.38	92.86	24.35	1,267.76	1,267.76	"	"

## GEORGIAN BAY

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such cost; upon ascertainment (by annual adjustment) of the actual cost of

Rural Power District	Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Cost of power purchased	Share of operating	
				Operating maintenance and administrative expenses	Interest
	\$ c.		\$ c.	\$ c.	\$ c.
Orangeville R.P.D.—Garafraxa E., Amaranth and Erin twps. ....	10,238.60	26.5	72.83	458.89	441.93
Owen Sound R.P.D.—Derby twp. ....	1,078.61	4.1	11.27	51.68	48.26
Port Perry R.P.D.—Reach, Cartwright, Scugog and Manvers twps. ....	36,917.90	92.0	252.84	1,743.56	1,649.48
Ripley R.P.D.—Huron and Kinloss twps. ....	4,396.05	9.6	26.38	196.83	196.88
Sauble R.P.D.—Amabel and Keppel twps. ....	422.60	0.7	1.92	15.16	13.98
Shelburne R.P.D.—Mulmur, Melancthon and Amaranth twps. ....	3,546.92	7.9	21.72	180.00	153.10
Sparrow Lake R.P.D.—Rama, Orillia N., Morrison and Matchedash twps. ....	23,810.44	90.8	249.54	1,090.93	1,034.43
Tara R.P.D.—Derby, Keppel, Amabel and Arran twps. ....	17,000.02	45.6	125.32	888.54	752.65
Thornton R.P.D.—Essa twp. ....	6,029.64	10.5	28.86	353.37	270.15
Utterson R.P.D.—Stephenson, Wood, Medora and Watt twps. ....	16,511.11	32.2	88.49	679.72	731.91
Uxbridge R.P.D.—Uxbridge, Scott, Georgina, Reach and Brock twps. ...	37,775.87	89.3	245.42	1,591.85	1,688.12
Walkerton Quarry R.P.D.—Brant twp. ....	655.88	1.5	4.12	24.72	28.41
Wasaga Beach R.P.D.—Nottawasaga, Sunnidale and Flos twps. ....	41,357.91	126.0	346.28	1,942.47	1,748.93
Wroxeter R.P.D.—Howick, Turnberry and Morris twps. ....	46,303.58	91.6	251.74	1,993.50	2,070.85
Totals—Municipalities. ....	6,101,345.52	20,331.3	51,639.50	311,127.89	267,329.43
Totals—Rural Power Districts. ....	597,647.80	1,635.9	5,524.87	28,857.77	26,014.53
Totals—Companies and Distributing Systems. ....	856,443.92	2,636.7	7,246.40	61,019.60	39,474.67
	7,555,437.24				
Non-operating capital. ....	9,558.06				
Grand Totals. ....	7,564,995.30	24,603.9	64,410.77	401,005.26	332,818.63



## SYSTEM

## G.B.—COST OF POWER

the Power Commission Act—of Power supplied to it by the Commission; the amount and the amount remaining to be credited or charged to each Municipality power supplied to it in the year ending October 31, 1931

costs and fixed charges			Cost in excess of revenue from power sold to private companies	Total cost of power for year as provided to be paid under Power Commission Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment	
Renewals	Obsolescence and contingencies	Sinking fund				Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
146.51	36.01	104.27	23.13	1,283.57	1,283.57	see page	219
13.52	4.01	11.32	3.58	143.64	143.64	"	"
557.79	125.69	387.89	80.29	4,802.54	4,802.54	see page	221
69.05	14.86	46.19	8.38	558.57	558.57	"	"
4.87	1.05	3.28	0.61	40.88	40.88	"	"
53.36	13.57	36.19	6.89	464.83	464.83	"	"
288.04	92.20	244.64	79.25	3,079.03	3,079.03	"	"
248.23	68.44	177.39	39.80	2,300.37	2,300.37	"	"
99.94	22.37	63.37	9.16	847.22	847.22	"	"
263.56	59.80	171.74	28.10	2,023.32	2,023.32	"	"
580.25	128.69	396.95	77.94	4,709.22	4,709.22	"	"
10.20	2.71	6.90	1.31	78.37	78.37	"	"
542.44	151.30	414.63	109.97	5,256.02	5,256.02	"	"
745.54	162.55	486.33	79.94	5,790.45	5,790.45	"	"
81,952.89	22,093.19	63,399.94	17,744.38	815,287.22	767,915.89	14,892.58	62,263.91
8,452.65	2,180.37	6,129.08	1,427.75	78,587.02	78,587.02	.....	.....
11,268.62	3,427.48	8,675.41	(19,172.13)	111,940.05	111,940.05	.....	.....
101,674.16	27,701.04	78,204.43	.....	1,005,814.29	958,442.96	.....	.....

## GEORGIAN BAY SYSTEM—

Statement showing the costs of distribution of power within each Rural Power and the amounts remaining to be credited to certain districts or charged to annual adjustment) of the actual costs

District and municipalities comprised therein	Total capital cost of each district, Provincial Government grant received and applied thereagainst, and the balance representing the investment by the Commission			Cost of power delivered to districts as shown in "cost of power" table preceding
	Total capital cost	Government grant	Commission's investment	
<b>Alliston R.P.D.</b> —Tossorontio, Essa and Tecumseth twps. ....	\$ c. 36,982.41	\$ c. 18,239.92	\$ c. 18,742.49	\$ c. 3,478.62
<b>Arthur R.P.D.</b> —Luther E. and Luther W. twps. ....	*4,293.01	2,089.05	2,203.96	163.28
<b>Bala R.P.D.</b> —Wood and Medora twps. ....	*50,977.39	24,603.30	26,374.09	2,171.68
<b>Barrie R.P.D.</b> —Vespra, Oro and Innisfil twps. ....	109,435.93	54,717.97	54,717.96	9,138.22
<b>Beaumaris R.P.D.</b> —Wood, Medora, Monck and Macaulay twps. ....	57,146.47	28,573.23	28,573.24	5,497.50
<b>Beaverton R.P.D.</b> —Mara and Thorah twps. ....	*11,394.70	5,603.96	5,790.74	344.96
<b>Beeton R.P.D.</b> —Tecumseh twp. ....	565.92	282.96	282.96	.....
<b>Bradford R.P.D.</b> —King, Tecumseth and Gwillimbury W. twps. ....	17,165.73	8,582.87	8,582.86	398.00
<b>Bruce R.P.D.</b> —Saugeen, Greenock, Carrick and Brant twps. ....	35,077.66	14,994.06	20,083.60	303.36
<b>Buckskin R.P.D.</b> —Matchedash, Wood and Medora twps. ....	3,494.08	1,747.04	1,747.04	788.68
<b>Cannington No. 1, R.P.D.</b> —Brock, Eldon and Mariposa twps. ....	*7,367.41	3,063.85	4,303.56	758.02
<b>Cannington No. 2, R.P.D.</b> —Brock twp. ....	*11,586.18	4,797.01	6,789.17	966.72
<b>Chatsworth R.P.D.</b> —Holland twp. ....	1,426.70	713.35	713.35	557.24
<b>Cookstown R.P.D.</b> —Essa and Innisfil twps. ....	702.77	351.39	351.38	37.55
<b>Creemore R.P.D.</b> —Nottawasaga and Osprey twps. ....	*23,895.46	11,574.19	12,321.27	782.87
<b>Elmvale R.P.D.</b> —Flos. Medonte, Vespra and Oro twps. ....	39,153.86	19,444.61	19,709.25	2,763.71
<b>Flesherton R.P.D.</b> —Artemesia twp. ....	2,919.21	1,459.60	1,459.61	352.39
<b>Georgina R.P.D.</b> —Georgina and Brock twps. ....	21,219.82	10,609.91	10,609.91	1,807.36
<b>Hawkestone R.P.D.</b> —Oro and Orillia twps. ....	40,051.18	20,025.59	20,025.59	1,126.99
<b>Holstein R.P.D.</b> —Egremont and Bentinck twps. ....	1,515.14	757.57	757.57	.....
<b>Huntsville R.P.D.</b> —Franklin, Brunel and Chaffey twps. ....	32,738.02	16,369.01	16,369.01	546.25
<b>Innisfil R.P.D.</b> —Innisfil and Gwillimbury W. twps. ....	64,521.65	32,260.83	32,260.82	7,273.84
<b>Lucknow R.P.D.</b> —Kinloss twp. ....	615.03	307.51	307.52	.....
<b>Mariposa R.P.D.</b> —Reach, Mariposa and Brock twps. ....	74,306.76	37,153.38	37,153.38	5,643.41
<b>Markdale R.P.D.</b> —Artemesia and Glenelg twps. ....	*1,836.56	838.90	997.66	52.17
<b>Meaford R.P.D.</b> —St. Vincent twp. ....	1,274.10	637.05	637.05	.....
<b>Medonte R.P.D.</b> —Tay twp. ....	16,723.14	8,361.57	8,361.57	307.56
<b>Midland R.P.D.</b> —Tiny and Tay twp. ....	15,532.57	7,766.29	7,766.28	680.85
<b>Neustadt R.P.D.</b> —Bentinck twp. ....	986.17	493.09	493.08	.....
<b>Nottawasaga R.P.D.</b> —Nottawasaga twp. ....	16,425.56	8,212.78	8,212.78	1,267.76
<b>Orangeville R.P.D.</b> —Garafraxa E., Amaranth and Erin twps. ....	29,792.34	14,896.17	14,896.17	1,283.57
<b>Owen Sound R.P.D.</b> —Derby twp. ....	2,414.26	1,207.13	1,207.13	143.64

NOTE.—Items marked \* include portions of transmission lines of system aggregating \$11,495.61 used for purposes of rural power districts.

## RURAL POWER DISTRICTS

G.B.—RURAL OPERATING

District, the revenues collected from (or charged to) customers within each district, the Municipalities comprising certain other districts upon ascertainment (by in the year ending October 31, 1931.

Distribution cost and fixed charges					Total cost	Revenue from power and light customers in each district	Amounts remaining to be credited to certain districts or charged to the municipalities comprising certain other districts	
Cost of operation, maintenance and administration	Interest on capital investment	Renewal charges	Obsolescence and contingencies	Sinking fund			Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
959.79	823.48	723.39	723.39	193.08	6,901.75	7,867.21	965.46	.....
110.95	92.82	80.38	80.38	21.76	549.57	489.06	.....	60.51
3,954.48	1,118.44	960.74	960.74	262.23	9,428.31	7,780.28	.....	1,648.03
3,310.15	2,119.59	1,887.84	1,887.84	496.98	18,840.62	16,844.65	.....	1,995.97
2,350.04	1,145.35	1,020.12	1,020.12	268.55	11,301.68	9,997.87	.....	1,303.81
225.52	210.14	183.43	183.43	49.27	1,196.75	751.26	.....	445.49
2.86	12.64	11.32	11.32	2.98	41.12	41.12	.....	.....
129.47	91.79	81.75	81.75	21.52	804.28	659.86	.....	144.42
280.95	75.13	50.12	50.12	13.24	772.92	994.67	221.75	.....
102.71	78.46	69.88	69.88	18.40	1,128.01	1,031.04	.....	96.97
222.09	188.19	142.94	142.94	44.13	1,498.31	1,602.91	104.60	.....
531.30	303.42	230.40	230.40	71.14	2,333.38	2,436.90	103.52	.....
107.84	31.70	28.23	28.23	7.43	760.67	865.98	105.31	.....
20.08	14.39	12.82	12.82	3.37	101.03	110.44	9.41	.....
590.01	504.43	434.43	434.43	118.27	2,864.44	2,092.72	.....	771.72
1,065.46	851.02	752.67	752.67	199.54	6,385.07	6,204.64	.....	180.43
114.05	64.75	57.67	57.67	15.18	661.71	506.65	.....	155.06
963.11	442.70	394.30	394.30	103.80	4,105.57	3,782.33	.....	323.24
1,224.50	868.20	773.27	773.27	203.56	4,969.79	3,970.27	.....	999.52
4.84	15.79	14.07	14.07	3.70	52.47	52.47	.....	.....
390.79	183.66	163.58	163.58	43.06	1,490.92	753.35	.....	737.57
2,276.76	1,321.65	1,177.15	1,177.15	309.88	13,536.43	12,269.37	.....	1,267.06
3.88	13.72	12.30	12.30	3.24	45.44	45.44	.....	.....
2,716.06	1,588.79	1,415.08	1,415.08	372.52	13,150.94	13,578.18	427.24	.....
88.84	42.47	34.67	34.67	9.96	262.78	228.01	.....	34.77
11.98	28.54	25.48	25.48	6.71	98.19	98.19	.....	.....
269.39	187.88	167.34	167.34	44.05	1,143.56	931.70	.....	211.86
408.31	396.78	353.40	353.40	93.03	2,285.77	1,671.26	.....	614.51
5.17	19.38	17.31	17.31	4.56	63.73	63.73	.....	.....
382.73	368.10	327.85	327.85	86.31	2,760.60	2,980.72	220.12	.....
458.31	632.28	563.15	563.15	148.25	3,648.71	2,819.10	.....	829.61
186.94	35.64	31.74	31.74	8.36	438.06	426.20	.....	11.86



## GEORGIAN BAY SYSTEM—

Statement showing the costs of distribution of power within each Rural Power and the amounts remaining to be credited to certain districts or charged to annual adjustment) of the actual costs

District and municipalities comprised therein:	Total capital cost of each district, Provincial Government grant received and applied thereagainst, and the balance representing the investment by the Commission			Cost of power delivered to districts as shown in "cost of power" table preceding
	Total capital cost	Government grant	Commission's investment	
<b>Port Perry R.P.D.</b> —Reach, Cartwright, Scugog and Manvers twps. ....	\$ c. 69,948.25	\$ c. 34,974.12	\$ c. 34,974.13	\$ c. 4,802.54
<b>Ripley R.P.D.</b> —Huron and Kinloss twps. ....	*7,621.75	3,577.41	4,044.34	558.57
<b>Sauble R.P.D.</b> —Amabel and Keppel twps. ....	4,336.00	2,168.00	2,168.00	40.88
<b>Shelburne R.P.D.</b> —Mulmur, Melancthon and Amaranth twps. ....	*11,201.55	5,157.20	6,044.35	464.83
<b>Sparrow Lake R.P.D.</b> —Rama, Orillia N., Morrison and Matchedash twps. ....	64,673.20	32,336.60	32,336.60	3,079.03
<b>Tara R.P.D.</b> —Derby, Keppel, Amabel and Arran twps. ....	*31,610.44	14,272.67	17,337.77	2,300.37
<b>Thornton R.P.D.</b> —Essa twp. ....	9,463.02	4,731.51	4,731.51	847.22
<b>Utterson R.P.D.</b> —Stephenson, Wood, Medora and Watt twps. ....	*33,862.02	16,431.40	17,430.62	2,023.32
<b>Uxbridge R.P.D.</b> —Uxbridge, Scott, Georgina, Reach and Brock twps. ....	82,475.33	41,237.66	41,237.67	4,709.22
<b>Walkerton Quarry R.P.D.</b> —Brant twp. ....				78.37
<b>Wasaga Beach R.P.D.</b> —Nottawasaga, Sunnidale and Flos twps. ....	46,940.67		46,940.67	5,256.02
<b>Wroxeter R.P.D.</b> —Howick, Turnberry and Morris twps. ....	73,559.45	35,464.85	38,094.60	5,790.45
	1,169,228.87	551,086.56	618,142.31	
Non-operating capital. ....	35,000.84	17,500.42	17,500.42	
<b>Totals. ....</b>	<b>1,204,229.71</b>	<b>568,586.98</b>	<b>635,642.73</b>	<b>78,587.02</b>

NOTE.—Items marked \* include portions of transmission lines of system aggregating \$11,495.61 used for purposes of rural power districts.

## GEORGIAN BAY

Statement showing the net Credit or Charge to each Municipality in respect of power interest added during the year; also the net amount Credited or Charged October 31, 1931, and the accumulated amount standing as

Municipality	Date commenced operating	Net credit or charge at October 31, 1930		Cash receipts and payments on account of such credits and charges	
		Credit	Charge	Credited	Charged
Alliston. ....	June, 1918	\$ c. 985.87		\$ c. 985.87	
Arthur. ....	Dec., 1916	559.61			559.61
Barrie. ....	April, 1913		2,952.16		
Beaverton. ....	Nov., 1914	897.36			897.36
Beeton. ....	Aug., 1918	1,493.77			1,493.77
Bradford. ....	Oct., 1918	139.89			139.89
Brechin. ....	Jan., 1915		94.23	94.23	
Cannington. ....	Nov., 1914	595.27			595.27
Chatsworth. ....	Dec., 1915	5.15			5.15
Chesley. ....	July, 1916	1,324.24			1,324.24

## RURAL POWER DISTRICTS

G.B.—RURAL OPERATING

District, the revenues collected from (or charged to) customers within each district, the Municipalities comprising certain other districts upon ascertainment (by in the year ending October 31, 1931.

Distribution cost and fixed charges					Total cost	Revenue from power and light customers in each district	Amounts remaining to be credited to certain districts or charged to the municipalities comprising certain other districts	
Cost of operation, maintenance and administration	Interest on capital investment	Renewal charges	Obsolescence and contingencies	Sinking fund			Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,803.76	1,536.50	1,368.50	1,368.50	360.26	11,240.06	10,341.13	.....	898.93
87.43	156.92	130.43	130.43	36.80	1,100.58	628.41	.....	472.17
80.05	8.11	7.22	7.22	1.90	145.38	302.36	156.98	.....
291.37	246.98	202.36	202.36	57.91	1,465.81	1,117.23	.....	348.58
1,816.30	1,231.19	1,096.58	1,096.58	288.67	8,608.35	7,584.50	.....	1,023.85
1,654.04	775.38	629.30	629.30	181.80	6,170.19	5,629.39	.....	540.80
156.91	212.30	189.09	189.09	49.78	1,644.39	1,385.56	.....	258.83
1,055.09	629.38	541.46	541.46	147.56	4,948.27	4,812.02	.....	136.25
1,952.96	1,766.04	1,572.95	1,572.95	414.08	11,988.20	9,529.15	.....	2,459.05
56.85	23.53	20.96	20.96	5.52	206.19	252.31	46.12	.....
2,845.02	1,777.82	791.73	791.73	416.84	11,879.16	13,621.28	1,742.12	.....
2,657.30	1,601.61	1,377.32	1,377.32	375.52	13,179.52	11,817.08	.....	1,362.44
37,936.44	23,837.03	20,126.72	20,126.72	5,584.70	186,198.68	170,968.00	4,102.63	19,333.31
Net debit.....							\$15,230.68	

## SYSTEM

G.B.—CREDIT OR CHARGE

supplied to it to October 31, 1930; the cash receipts and payments thereon, and to each Municipality in respect of power supplied in the year ending a Credit or Charge to each Municipality at October 31, 1931

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1931		Accumulated amount standing as a credit or charge on October 31, 1931	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
19.65	.....	605.09	.....	625.74	.....
11.04	.....	3.99	.....	15.03	.....
.....	113.03	.....	8,613.77	.....	11,684.02
15.83	.....	.....	1,326.02	.....	1,310.19
29.14	.....	822.99	.....	852.13	.....
2.64	.....	.....	472.57	.....	469.93
.....	2.01	.....	142.93	.....	144.94
13.04	.....	.....	619.40	.....	606.36
0.09	.....	7.62	.....	7.71	.....
26.27	.....	2,699.05	.....	2,725.32	.....

## GEORGIAN BAY

Statement showing the net Credit or Charge to each Municipality in respect of power interest added during the year; also the net amount Credited or Charged October 31, 1931, and the accumulated amount standing as

Municipality	Date commenced operating	Net credit or charge at October 31, 1930		Cash receipts and payments on account of such credits and charges	
		Credit	Charge	Credited	Charged
		\$ c.	\$ c.	\$ c.	\$ c.
Coldwater.....	Mar., 1913	864.54			864.54
Collingwood.....	Mar., 1913	1,083.61			1,083.61
Cookstown.....	May, 1918		113.85	113.85	
Creemore.....	Nov., 1914	438.29			438.29
Dundalk.....	Dec., 1915	456.25			456.25
Durham.....	Dec., 1915		109.44	109.44	
Elmvale.....	June, 1913		251.63	251.63	
Elmwood.....	April, 1918	115.56			115.56
Flesherton.....	Dec., 1915	285.91			285.91
Grand Valley.....	Dec., 1916	479.58			479.58
Gravenhurst.....	Nov., 1915	1,825.32			1,825.32
Hanover.....	Sept., 1916	3,216.31			3,216.31
Holstein.....	May, 1916		3,469.79	970.00	
Huntsville.....	Sept., 1916	3,894.54			3,894.54
Kincardine.....	Mar., 1921	2,454.45			2,454.45
Kirkfield.....	June, 1920	327.38			327.38
Lucknow.....	Jan., 1921	1,013.77			1,013.77
Markdale.....	Mar., 1916	116.09			116.09
Meaford.....	Jan., 1924	303.40			303.40
Midland.....	July, 1911		9,006.18	9,006.18	
Mount Forest.....	Dec., 1915	575.87			575.87
Muskoka township.....	June, 1929	248.05			
Neustadt.....	Dec. 1918		2,025.97		
Orangeville.....	July, 1916	2,626.94			2,626.94
Owen Sound.....	Dec., 1915		196.73	196.73	
Paisley.....	Sept., 1923	770.46			770.46
Penetanguishene.....	July, 1911	985.84			985.84
Port Elgin.....	Mar., 1931				
Port McNicoll.....	Jan., 1915	62.64			62.64
Port Perry.....	Sept., 1922	687.53			687.53
Priceville.....	Mar., 1920		43.24		
Ripley.....	Jan., 1921		19.84	19.84	
Rosseau.....	July, 1931				
Shelburne.....	July, 1916	360.11			360.11
Southampton.....	Feb., 1931				
Stayner.....	Oct., 1913	446.70			446.70
Sunderland.....	Nov., 1914	360.80			360.80
Tara.....	Feb., 1918		50.38	50.38	
Teeswater.....	Dec., 1920	10.44			10.44
Thornton.....	Nov., 1918	493.46			493.46
Tottenham.....	Oct., 1918		395.22	53.56	
Uxbridge.....	Sept., 1922	939.63			939.63
Victoria Harbour.....	July, 1914	1.75			1.75
Walkerton.....	Feb., 1931				
Waubauskene.....	Dec., 1914		66.97	66.97	



## SYSTEM

G.B.—CREDIT OR CHARGE

supplied to it to October 31, 1930; the cash receipts and payments thereon, and to each Municipality in respect of power supplied in the year ending a Credit or Charge to each Municipality at October 31, 1931

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1931		Accumulated amount standing as a credit or charge on October 31, 1931	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
18.06			483.29		465.23
21.49			406.67		385.18
	2.19	170.05		167.86	
8.70			50.72		42.02
9.05			633.22		624.17
	2.31		3,513.99		3,516.30
	4.80		755.70		760.50
1.92			229.41		227.49
5.45			129.38		123.93
9.53			47.17		37.64
30.41		531.06		561.47	
64.34		822.52		886.86	
	126.51		426.60		3,052.90
88.74		7.54		96.28	
55.77		1,975.85		2,031.62	
5.45		72.35		77.80	
16.89		1,048.13		1,065.02	
2.51			413.22		410.71
6.02			2,153.34		2,147.32
	182.59		15,055.32		15,237.91
11.36			2,552.94		2,541.58
9.92		19.65		277.62	
	81.04		905.86		3,012.87
53.39			78.15		24.76
	3.54		16,375.38		16,378.92
13.57		877.94		891.51	
14.85			2,853.71		2,838.86
			392.44		392.44
1.04			473.59		472.55
13.64			33.32		19.68
	1.73	100.77		55.80	
	0.35	147.96		147.61	
			268.53		268.53
7.02			954.67		947.65
		211.92		211.92	
8.47		444.78		453.25	
6.34			322.46		316.12
	0.89	784.30		783.41	
0.20			35.59		35.39
8.22		167.85		176.07	
	14.68	480.79		124.45	
17.22		599.85		617.07	
0.03			403.26		408.23
			911.48		911.48
	1.42		69.48		70.90

## GEORGIAN BAY

Statement showing the net Credit or Charge to each Municipality in respect of power interest added during the year; also the net amount Credited or Charged October 31, 1931, and the accumulated amount standing as

Municipality or Rural Power District	Date commenced operating	Net credit or charge at October 31, 1930		Cash receipts and payments on account of such credits and charges	
		Credit	Charge	Credited	Charged
		\$ c.	\$ c.	\$ c.	\$ c.
Wiarton.....	May, 1931				
Windermere.....	June, 1930	631.49			631.49
Wingham.....	Dec., 1920	780.25			780.25
Woodville.....	Nov., 1914	371.47			371.47
RURAL POWER DISTRICTS*					
Alliston R.P.D.....	Nov., 1929	170.24			
Arthur R.P.D.....	Dec., 1929	18.57			
Bala R.P.D.....	Jan., 1930	127.08			
Barrie R.P.D.....	Aug., 1923	874.51			
Beaumaris R.P.D.....	June, 1928		519.50		
Beaverton R.P.D.....	Aug., 1930		120.57		
Bradford R.P.D.....	Aug., 1929		94.28		
Bruce R.P.D.....	Oct., 1931				
Bucks skin R.P.D.....	July, 1928		505.43		
Cannington No. 1, R.P.D.....	May, 1924	751.23			
Cannington No. 2, R.P.D.....	May, 1924	958.21			
Chatsworth R.P.D.....	Dec., 1928	228.16			
Cookston R.P.D.....	Dec., 1930				
Creemore R.P.D.....	Dec., 1930				
Elmvale R.P.D.....	Jan., 1924		20.70		
Flesherton R.P.D.....	Feb., 1922		416.52		
Georgina R.P.D.....	Oct., 1926		719.91		
Hawkestone R.P.D.....	Aug., 1930		717.44		
Huntsville R.P.D.....	Aug., 1931				
Innisfil R.P.D.....	Feb., 1928		511.25		188.26
Mariposa R.P.D.....	Sept., 1923	3,590.70			
Markdale R.P.D.....	July, 1924		420.94		
Medonte R.P.D.....	July, 1930		24.61		
Midland R.P.D.....	Nov., 1930				
Nottawasaga R.P.D.....	Jan., 1922	835.01			
Orangeville R.P.D.....	Aug., 1927		1,514.41		
Owen Sound R.P.D.....	Mar., 1931				
Port Perry R.P.D.....	Dec., 1922		1,212.78		
Ripley R.P.D.....	Nov., 1930				
Sauble R.P.D.....	Oct., 1931				
Shelburne R.P.D.....	Feb., 1926		161.23		
Sparrow Lake R.P.D.....	Oct., 1925	3,143.17			
Tara R.P.D.....	Jan., 1925	948.70			
Thornton R.P.D.....	Aug., 1930		109.07		
Utterson R.P.D.....	June, 1930		532.30		
Uxbridge R.P.D.....	Sept., 1925		1,804.38		
Walkerton Quarry R.P.D.....	Feb., 1922	12.54			
Wasaga Beach R.P.D.....	July, 1923	6,686.48			
Wroxeter R.P.D.....	Feb., 1929		692.09		
Totals.....		51,574.19	28,893.04	10,932.81	33,169.80

\*For townships included in rural power districts see "Cost of Power" and "Rural Operating" statements preceding.

## SYSTEM

G.B.—CREDIT OR CHARGE

supplied to it to October 31, 1930; the cash receipts and payments thereon, and to each Municipality in respect of power supplied in the year ending a Credit or Charge to each Municipality at October 31, 1931

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1931		Accumulated amount standing as a credit or charge on October 31, 1931	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
12.59		1,777.53		1,777.53	
15.39		81.02		93.61	
7.43		430.98		446.37	
			155.33		147.90
6.81		965.46		1,142.51	
0.74			60.51		41.20
5.08			1,648.03		1,515.87
34.98			1,995.97		1,086.48
	20.78		1,303.81		1,844.09
	4.82		445.49		570.88
	3.77		144.42		242.47
		221.75		221.75	
	20.22		96.97		622.62
30.05		104.60		885.88	
38.33		103.52		1,100.06	
9.13		105.31		342.60	
		9.41		9.41	
			771.72		771.72
	0.83		180.43		201.96
	16.66		155.06		588.24
	28.80		323.24		1,071.95
	28.70		999.52		1,745.66
			737.57		737.57
	27.36		1,267.06		1,993.93
143.63		427.24		4,161.57	
	16.84		34.77		472.55
	0.98		211.86		237.45
			614.51		614.51
33.40		220.12		1,088.53	
	60.58		829.61		2,404.60
			11.86		11.86
	48.51		898.93		2,160.22
			472.17		472.17
		156.98		156.98	
	6.45		348.58		516.26
125.73			1,023.85	2,245.05	
37.95			540.80	445.85	
	4.36		258.83		372.26
	21.29		136.25		689.84
	72.18		2,459.05		4,335.61
0.50		46.12		59.16	
267.46		1,742.12		8,696.06	
	27.68		1,362.44		2,082.21
1,396.50	952.96	18,995.21	81,597.22	35,724.47	97,438.78



## GEORGIAN BAY SYSTEM

## Reserve for Renewals, October 31, 1931

Total provision for renewals to October 31 1930.....	\$1,100,256.29	
Deduct:		
Expenditures to October 31, 1930.....	94,561.27	
Balance brought forward October 31, 1930.....		\$1,005,695.02
Added during the year ending October 31, 1931:		
Amounts charged to municipalities and rural power districts as part of the cost of power delivered to them.....	\$90,405.54	
Amount included in costs of distribution of power within rural power districts.....	20,126.72	
Provision against equipment employed in respect of contracts with private companies which purchased power and against equipment in local distribution systems.....	11,268.62	
Provision for renewals on equipment transferred from Niagara System.....	2,628.23	
Provision for renewals on transmission lines purchased.....	902.00	
Interest at 4% per annum on monthly balances at the credit of the account.....	40,369.01	
		165,700.12
		<u>\$1,171,395.14</u>
Deduct:		
Expenditures during the year ending October 31, 1931.....	19,820.56	
Balance carried forward October 31, 1931.....		<u><u>\$1,151,574.58</u></u>

## GEORGIAN BAY SYSTEM

## Reserve for Obsolescence and Contingencies, October 31, 1931

Balance brought forward October 31, 1930.....	\$288,862.02	
Amount provided on transfer of Walkerton and Saugeen properties.....	305.61	
		<u>\$289,167.63</u>
Added during the year ending October 31, 1931:		
Amounts charged to municipalities and rural power districts as part of the cost of power delivered to them.....	\$24,273.56	
Amounts included in the costs of distribution of power within rural power districts.....	20,126.72	
Provision against equipment employed in respect of contracts with private companies which purchased power and against local distribution systems.....	3,427.48	
Interest at 4% per annum on monthly balances at the credit of the account.....	11,566.71	
		59,394.47
		<u>\$348,562.10</u>
Deduct:		
Contingencies met with during the year ending October 31, 1931.....	5,250.23	
Balance carried forward October 31, 1931.....		<u><u>\$343,311.87</u></u>

## GEORGIAN BAY SYSTEM

## SINKING FUND

Statement showing Sinking Fund paid by each Municipality in the periods mentioned hereunder, as part of the cost of power delivered thereto, together with its proportionate share of other sinking funds, provided out of other revenues of the system, and interest allowed thereon to October 31, 1931

Municipality	Period of years ending Oct. 31, 1931	Amount	Municipality	Period of years ending Oct. 31, 1931	Amount
		\$ c.			\$ c.
Alliston.....	8 years	8,470.85	Walkerton.....	1 years	1,019.52
Arthur.....	10 "	8,504.07	Waubauskene.....	12 "	1,630.42
Barrie.....	13 "	54,684.26	Warton.....	1 "	479.50
Beaverton.....	12 "	10,046.41	Windermere.....	2 "	332.36
Beeton.....	8 "	6,788.11	Wingham.....	7 "	14,243.23
Bradford.....	8 "	7,573.67	Woodville.....	12 "	5,253.44
Brechin.....	12 "	3,991.90	RURAL POWER DISTRICTS*		
Cannington.....	12 "	7,411.17	Alliston R.P.D.....	2 years	801.42
Chatsworth.....	11 "	1,766.28	Arthur R.P.D.....	2 "	48.84
Chesley.....	10 "	14,455.87	Bala R.P.D.....	2 "	723.15
Coldwater.....	13 "	5,434.63	Barrie R.P.D.....	9 "	3,258.99
Collingwood.....	13 "	66,381.32	Beaumaris R.P.D.....	4 "	1,888.95
Cookstown.....	8 "	2,042.48	Beaverton R.P.D.....	2 "	89.80
Creemore.....	12 "	5,263.04	Beeton R.P.D.....	6 "	16.83
Dundalk.....	11 "	4,939.81	Bradford R.P.D.....	3 "	94.77
Durham.....	11 "	14,351.11	Bruce R.P.D.....	1 "	30.31
Elmvale.....	13 "	7,351.15	Buckskin R.P.D.....	4 "	316.97
Elmwood.....	8 "	1,499.85	Cannington No. 1, R.P.D.....	8 "	880.30
Flesherton.....	11 "	2,809.55	Cannington No. 2, R.P.D.....	8 "	1,172.61
Grand Valley.....	10 "	5,128.94	Chatsworth R.P.D.....	3 "	141.95
Gravenhurst.....	11 "	8,321.62	Cookstown R.P.D.....	1 "	6.68
Hanover.....	10 "	36,844.73	Creemore R.P.D.....	1 "	186.95
Holstein.....	10 "	1,634.80	Elmvale R.P.D.....	8 "	884.99
Huntsville.....	10 "	23,842.16	Flesherton R.P.D.....	10 "	340.75
Kincardine.....	7 "	13,214.57	Georgina R.P.D.....	6 "	1,031.17
Kirkfield.....	7 "	1,349.31	Hawkestone R.P.D.....	2 "	289.49
Lucknow.....	7 "	6,676.63	Holstein R.P.D.....	3 "	5.06
Markdale.....	10 "	3,751.29	Huntsville R.P.D.....	1 "	85.38
Meaford.....	7 "	8,843.78	Innisfil R.P.D.....	4 "	2,324.01
Midland.....	13 "	100,398.65	Lucknow R.P.D.....	6 "	20.94
Mount Forest.....	11 "	12,785.56	Mariposa R.P.D.....	9 "	4,537.92
Muskoka twp.....	3 "	331.83	Markdale R.P.D.....	8 "	255.21
Neustadt.....	8 "	4,457.46	Meaford R.P.D.....	3 "	20.42
Orangeville.....	10 "	15,643.23	Medonte R.P.D.....	2 "	82.19
Owen Sound.....	11 "	75,492.46	Midland R.P.D.....	1 "	149.12
Paisley.....	7 "	3,771.93	Neustadt R.P.D.....	5 "	16.44
Penetanguishene.....	15 "	29,708.19	Nottawasaga R.P.D.....	10 "	1,848.82
Port Elgin.....	1 "	420.11	Orangeville R.P.D.....	5 "	801.58
Port McNicoll.....	12 "	2,526.85	Owen Sound.....	1 "	21.30
Port Perry.....	7 "	5,610.51	Port Perry R.P.D.....	9 "	1,723.46
Priceville.....	7 "	602.49	Ripley R.P.D.....	6 "	105.28
Ripley.....	7 "	2,905.55	Sauble R.P.D.....	1 "	5.46
Rosseau.....	1 "	132.39	Shelburne R.P.D.....	6 "	334.04
Shelburne.....	10 "	7,899.82	Sparrow Lake R.P.D.....	7 "	2,293.99
Southampton.....	1 "	549.50	Tara R.P.D.....	7 "	1,134.61
Stayner.....	13 "	6,733.95	Thornton R.P.D.....	2 "	141.85
Sunderland.....	12 "	5,175.44	Utterson R.P.D.....	2 "	435.47
Tara.....	8 "	3,742.57	Uxbridge R.P.D.....	7 "	1,785.91
Teeswater.....	7 "	4,979.46	Walkerton Quarry R.P.D.....	10 "	211.57
Thornton.....	8 "	1,420.55	Wasaga R.P.D.....	9 "	4,638.47
Tottenham.....	8 "	4,296.54	Wroxeter R.P.D.....	3 "	1,543.38
Uxbridge.....	7 "	5,897.48			
Victoria Harbour.....	12 "	2 883 39			701,427.54

\*For townships included in rural power districts see "Cost of Power" and "Rural Operating" statements preceding.

**GEORGIAN BAY SYSTEM****Reserve for Sinking Fund—October 31, 1931**

Total provision for sinking fund to October 31, 1930 ..... \$593,883.09

Provided in the year ending October 31, 1931:

By charges included in the cost of power delivered to municipalities and rural power districts .....	\$69,529.02	
By charges included in the costs of distribution of power within rural power districts.....	5,584.70	
By charges against contracts with private companies which purchased power and local distribution systems.....	8,675.41	
Interest at 4% per annum on the amount standing at the credit of the account.....	23,755.32	107,544.45
		<u>\$701,427.54</u>



### GEORGIAN BAY RURAL LINES

Statement showing Interest, Sinking Fund, Renewals and Contingencies charged by the Commission to the Municipalities which operate the respective Rural Lines, for the year ending October 31, 1931

Operated by	Capital cost	Interest	Sinking fund	Renewals	Contingencies	Total interest, sinking fund, renewals and contingencies charged
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Brechin.....	922.02	48.22	16.60	18.44	9.22	92.48
Flesherton.....	1,885.41	105.77	33.94	37.71	18.85	196.27
Totals....	2,807.43	153.99	50.54	56.15	28.07	288.75

### GEORGIAN BAY RURAL LINES

Statement showing the total Sinking Fund paid in respect of each line, together with interest allowed thereon to October 31, 1931

Lines operated by	Period of years ending October 31, 1931	Amount
		\$ c.
Brechin.....	13 years	249.57
Flesherton.....	14 "	437.66
Total.....		687 23

### GEORGIAN BAY RURAL LINES

#### Reserve for Sinking Fund—October 31, 1931

Total provision for sinking fund to October 31, 1930..... \$612.20

Provided in year ending October 31, 1931:

By charges against municipalities which operate the lines.....	\$50.54	
Interest at 4% per annum on amounts standing at the credit of the reserve accounts.....	24.49	75.03
Total.....		\$687.23

## EASTERN ONTARIO

## Operating Account for Year

## COSTS OF OPERATION AS PROVIDED UNDER THE TERMS OF THE POWER COMMISSION ACT

Power purchased.....		\$637,903.94
Costs of operation and maintenance, including the proportion of administrative expenses chargeable to the operation of the system:		
Generation, transmission and distribution equipment.....	\$879,182.99	
Rural power districts.....	102,331.89	
		<hr/> 981,514.88
Interest on capital investment in:		
Generation, transmission and distribution equipment.....	\$881,539.94	
Rural power districts.....	57,205.62	
		<hr/> 938,745.56
Provision for renewals of:		
Generation, transmission and distribution equipment.....	\$192,246.96	
Rural power districts.....	48,946.74	
		<hr/> 241,193.70
Provision for obsolescence and contingencies in respect of:		
Generation, transmission and distribution equipment.....	\$86,194.85	
Rural power districts.....	24,473.37	
		<hr/> 110,668.22
Provision for sinking funds:		
By charges included in the cost of power delivered to municipalities and rural power districts.....	\$94,291.31	
By charges against contracts with private companies which purchase power and local distribution systems.....	59,879.84	
By charges included in the cost of distribution of power within rural power districts.....	13,101.69	
		<hr/> 167,272.84
		<hr/> <hr/> \$3,077,299.14

## SYSTEM

ending October 31, 1931

## REVENUE FOR PERIOD

Collected from municipalities.....	\$1,499,023.93	
Power sold to private companies and local distribution systems.....	1,336,413.22	
Collected from customers in rural power districts.....	397,484.65	
		<u>\$3,232,921.80</u>

## Add:

Amounts due by certain municipalities being the difference between the sums paid and the cost of power supplied to them in the year .....	\$23,727.27	
Amounts due by municipalities comprising certain rural power districts, being the difference between the revenue collected from customers therein and the cost of power supplied them in the year .....	17,557.03	
		<u>41,284.30</u>
		<u>\$3,274,206.10</u>

## Deduct:

Amounts collected from certain municipalities in excess of the sums required to be paid by them for power supplied in the year.....	\$38,970.80	
Amounts collected from customers in certain rural power districts in excess of the cost of power delivered thereto.....	21,008.96	
		<u>59,979.76</u>

Revenue.....\$3,214,226.34

## Deduct:

Profit from power sold to local distribution systems, transferred to the credit of obsolescence and contingency reserve.....	136,927.20	
		<u>\$3,077,299.14</u>



## EASTERN ONTARIO

Statement showing the amount to be paid by each Municipality as the Cost—under the received by the Commission from each Municipality on account of such cost; pality upon ascertainment (by annual adjustment) of the actual cost

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Cost of power purchased	Share of operating	
	To Jan. 1 1931	To Oct. 31 1931				Operating, maintenance and administrative expenses	Interest
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
Alexandria.....		60.00	99,900.64	199.5	1,148.69	3,152.17	4,559.78
Apple Hill.....		60.00	9,368.56	28.4	163.52	671.88	425.68
Athens.....	80.00	65.00	32,225.70	88.9	511.87	1,183.44	1,477.21
Belleville.....		32.00	784,347.81	3,599.9	20,727.70	31,177.11	34,018.20
Bloomfield.....		60.00	34,584.79	89.6	515.90	1,775.58	1,586.80
Brighton.....	35.00	37.00	61,548.23	243.0	1,399.16	3,344.39	2,834.15
Brockville.....		30.00	403,794.27	2,149.1	12,374.21	17,451.58	18,252.66
Cardinal.....		37.50	25,841.27	113.4	652.94	1,178.28	1,191.59
Carleton Place.....		35.00	248,081.85	1,112.3	6,404.46	7,698.94	11,258.74
Chesterville.....		40.00	55,543.54	204.1	1,175.18	3,017.99	2,484.14
Deseronto.....		54.00	44,421.20	133.6	769.25	2,066.73	2,060.13
Finch.....		65.00	20,359.30	43.6	251.04	942.45	930.59
Hastings.....		50.00	14,554.29	31.8	183.10	1,157.33	484.96
Havelock.....		45.00	72,352.37	220.6	1,270.18	2,722.97	3,296.50
Kemptville.....		40.00	69,952.72	234.8	1,351.94	2,515.32	3,127.86
Lakefield.....	48.00	46.00	57,071.78	207.8	1,196.48	2,423.80	2,627.37
Lanark.....	55.00	50.00	20,955.57	58.6	337.41	681.00	951.93
Lancaster.....		97.00	37,473.97	58.3	335.68	1,007.80	1,709.15
Lindsay.....		40.00	415,901.51	1,572.2	9,052.50	19,021.11	19,104.85
Madoc.....	44.44	44.50	45,593.18	147.8	851.01	2,340.67	2,090.04
Marmora.....	48.00	47.00	26,359.40	86.2	496.33	1,362.84	1,209.40
Martintown.....		50.00	6,941.29	24.0	138.19	546.21	316.29
Maxville.....	86.00	75.00	29,910.67	66.0	380.02	1,206.65	1,359.09
Napanee.....	35.00	36.00	218,647.39	947.5	5,455.57	9,332.41	10,046.77
Norwood.....	37.00	38.00	36,946.04	151.2	870.59	1,894.08	1,682.25
Oshawa.....		34.00	2,185,206.24	8,674.6	49,947.09	82,417.37	101,081.71
Ottawa.....		22.50	635,691.33	4,924.7	28,355.71	27,273.23	29,310.24
Ottawa.....			964.71	19,071.7	209,788.69	605.99	44.30
Perth.....		35.00	195,425.02	959.0	5,521.78	6,541.43	8,863.58
Peterborough.....		30.00	1,238,359.58	6,127.7	35,282.41	41,158.82	56,918.04
Picton.....	48.00	45.00	258,154.83	755.1	4,347.76	10,362.68	11,849.78
Port Hope.....	38.00	37.00	287,685.18	1,229.8	7,081.01	13,855.33	13,246.07
Prescott.....		30.00	139,582.47	802.7	4,621.83	6,953.14	6,352.95
Richmond.....	65.00	55.00	11,066.00	40.6	853.13	266.47	506.70
Russell.....	70.00	65.00	25,200.12	55.5	319.56	998.47	1,148.62
Smith's Falls.....		30.00	281,021.91	1,610.5	9,273.02	10,935.02	12,725.92
Stirling.....	28.60	30.00	49,663.48	258.4	1,487.83	2,147.29	2,283.54
Tweed.....		54.00	60,088.49	160.5	924.14	3,147.04	2,766.51
Warkworth.....		50.00	18,462.58	65.2	375.41	1,032.70	843.75
Wellington.....	48.00	45.00	51,587.66	166.0	955.80	2,142.60	2,369.84
Whitby.....	36.00	35.00	226,552.14	893.1	5,142.34	7,575.00	10,477.67
Williamsburg.....	45.00	42.00	10,375.69	47.2	271.77	794.26	468.14
Winchester.....		40.00	50,290.22	208.9	1,202.82	2,698.60	2,281.89

## SYSTEM

## E.O.—COST OF POWER

Power Commission Act—of Power supplied to it by the Commission, the amount and the amount remaining to be credited or charged to each Municipality of power supplied to it in the year ending October 31, 1931.

costs and fixed charges			Cost in excess of revenue from power sold to private companies	Total cost of power for year as provided to be paid under Power Commission Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment	
Renewals	Obsolescence and contingencies	Sinking fund				Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,727.27	320.98	1,033.48	433.18	12,375.55	11,972.65	.....	402.90
147.19	33.81	95.15	61.67	1,598.90	1,706.00	107.10	.....
517.73	110.47	327.88	193.03	4,321.63	6,015.52	1,693.89	.....
6,340.65	6,018.81	7,339.03	7,816.62	113,438.12	115,195.96	1,757.84	.....
481.62	197.08	353.15	194.55	5,104.68	5,374.50	269.82	.....
661.23	458.13	618.19	527.64	9,842.89	8,900.63	.....	942.26
5,001.04	1,587.82	3,969.61	4,666.42	63,303.34	64,472.49	1,169.15	.....
356.04	112.54	257.98	246.23	3,995.60	4,253.40	257.80	.....
3,390.77	932.58	2,462.10	2,415.18	34,562.77	38,929.10	4,366.33	.....
818.65	206.51	557.94	443.17	8,703.58	8,165.05	.....	538.53
580.84	295.24	454.28	290.09	6,516.56	7,213.50	696.94	.....
344.75	66.75	208.63	94.67	2,838.88	2,833.98	.....	4.90
135.90	65.92	106.89	69.05	2,203.15	1,589.98	.....	613.17
919.57	454.37	729.32	478.99	9,871.90	9,925.75	53.85	.....
1,044.66	244.87	692.90	509.83	9,487.38	9,391.30	.....	96.08
656.55	394.96	576.61	451.20	8,326.97	9,641.29	1,314.32	.....
336.35	74.42	212.75	127.24	2,721.10	2,983.98	262.88	.....
666.97	115.80	387.42	126.59	4,349.41	5,651.03	1,301.62	.....
4,631.82	2,898.18	4,185.89	3,413.77	62,308.12	62,887.29	579.17	.....
561.52	300.85	459.89	320.92	6,924.90	6,573.66	.....	351.24
324.72	182.25	266.77	187.17	4,029.48	4,066.52	37.04	.....
104.86	26.29	70.13	52.11	1,254.08	1,198.30	.....	55.78
504.81	97.60	306.83	143.31	3,998.31	5,075.63	1,077.32	.....
2,140.89	1,674.61	2,180.17	2,057.34	32,887.76	33,947.69	1,059.93	.....
377.39	279.82	366.73	328.31	5,799.17	5,713.84	.....	85.33
23,669.75	15,697.09	22,102.47	18,835.49	313,750.97	294,934.64	.....	18,816.33
5,624.01	2,728.38	6,064.04	10,693.19	110,048.80	115,121.02	5,072.22	.....
19.30	4.82	10.15	.....	210,473.25	210,473.25	.....	.....
2,554.16	737.89	1,928.33	2,082.31	28,229.48	33,563.65	5,334.17	.....
10,400.04	9,953.09	12,285.51	13,305.31	179,303.22	183,830.75	4,527.53	.....
3,392.67	1,545.37	2,625.41	1,639.58	35,763.25	34,391.10	.....	1,372.15
2,868.32	2,181.01	2,876.89	2,670.31	44,778.94	45,722.38	943.44	.....
1,650.02	566.07	1,367.95	1,742.93	23,254.89	24,081.50	826.61	.....
221.32	29.87	116.52	.....	1,994.01	2,311.35	317.34	.....
424.55	82.97	258.05	120.51	3,352.73	3,667.29	314.56	.....
3,345.97	1,116.12	2,741.68	3,496.94	43,634.67	48,316.00	4,681.33	.....
384.07	414.19	489.38	561.07	7,767.37	7,688.17	.....	79.20
824.80	344.44	612.63	348.50	8,968.06	8,666.10	.....	301.96
214.45	126.03	185.36	141.57	2,919.27	3,261.62	342.35	.....
642.55	331.26	522.79	360.44	7,325.28	7,544.94	219.66	.....
2,468.39	1,584.37	2,292.14	1,939.22	31,479.13	31,411.69	.....	67.44
139.29	43.71	102.69	102.49	1,922.35	2,003.14	80.79	.....
710.71	198.78	504.11	453.59	8,050.50	8,356.30	305.80	.....

## EASTERN ONTARIO

Statement showing the amount to be paid by each Municipality as the Cost—under the received by the Commission from each Municipality on account of such cost; pality upon ascertainment (by annual adjustment) of the actual cost

Rural Power District	Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Cost of power purchased	Share of operating	
				Operating, maintenance and administrative expenses	Interest
	\$ c.		\$ c.	\$ c.	\$ c.
<b>RURAL POWER DISTRICTS</b>					
<b>Alexandria</b> R.P.D.—Lochiel twp...	11,066.89	21.1	121.49	364.84	511.46
<b>Belleville</b> R.P.D.—Sidney, Thurlow, Tyendinaga and Huntingdon twps.	55,082.84	250.4	1,441.77	2,046.76	2,491.79
<b>Bowmanville</b> R.P.D.—Darlington twp.....	23,953.40	94.9	546.42	933.58	1,098.07
<b>Brighton</b> R.P.D.—Brighton, Cramahe and Murray twps.....	3,849.93	15.2	87.52	247.30	177.23
<b>Brockville</b> R.P.D.—Leeds and Lansdowne Front, Escott Front, Yonge Front, Elizabethtown, Leeds and Lansdowne Rear, Augusta Yonge and Escott Rear twps.....	59,692.37	266.3	1,533.32	2,943.67	2,728.14
<b>Campbellford</b> R.P.D.—Seymour and Rawdon twps.....	13,092.54	65.8	378.87	436.56	601.10
<b>Chesterville</b> R.P.D.—Russell, Cambridge, Winchester, Williamsburg, Finch and Osnaburck twps.....	47,097.22	144.0	829.13	2,001.88	2,133.99
<b>Cobourg</b> R.P.D.—Hope, Haldimand, Hamilton and Alnwick twps.....	47,038.01	183.0	1,053.69	1,687.08	2,155.98
<b>Colborne</b> R.P.D.—Haldimand, Cramahe twps.....	17,387.20	66.6	383.47	701.95	794.75
<b>Fenelon Falls</b> R.P.D.—Fenelon Somerville, Bexley and Digby twps.	2,087.18	8.8	50.67	66.15	96.32
<b>Iroquois</b> R.P.D.—Mountain, Matilda, Williamsburg, Winchester, and Gower S. twps.....	51,300.18	345.7	1,990.49	2,165.76	2,370.05
<b>Kemptville</b> R.P.D.—Oxford twp...	2,781.13	8.2	47.21	104.13	125.88
<b>Kingston</b> R.P.D.—Ernestown, Portland, Kingston, Loughborough, Pittsburg, Leeds and Lansdowne Front twps.....	60,153.72	214.0	2,109.58	2,176.32	2,767.87
<b>Lakefield</b> R.P.D.—Smith and Harvey twps.....	878.31	4.4	25.33	116.38	40.53
<b>Lindsay</b> R.P.D.—Ops and Fenelon twps.....	1,420.60	3.6	20.73	45.81	55.55
<b>Martintown</b> R.P.D.—Charlottenburg and Lancaster twps.....	15,786.22	44.7	257.38	608.32	713.75
<b>Maxville</b> R.P.D.—Roxborough, Kenyon, Caledonia, Plantagenet N. and Plantagenet S. twps.....	36,756.50	110.9	638.55	1,435.04	1,666.74
<b>Millbrook</b> R.P.D.—Manvers and Cavan twps.....	9,519.45	28.3	162.95	472.10	436.90
<b>Napanee</b> R.P.D.—Hungerford, Ernestown, Fredericksburg N., Richmond, Camden East, Sheffield and Portland twps.....	38,898.47	122.4	704.76	1,660.31	1,750.32
<b>Nepean</b> R.P.D.—March, Nepean, Goulburn, Gower N., Gloucester, Osgoode and Cumberland twps....	7,054.12	446.8	9,382.58	173.59	297.08



## SYSTEM

## E.O.—COST OF POWER

Power Commission Act—of Power supplied to it by the Commission, the amount and the amount remaining to be credited or charged to each Municipality of power supplied to it in the year ending October 31, 1931.

costs and fixed charges			Cost in excess of revenue from power sold to private companies	Total cost of power for year as provided to be paid under Power Commission Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment	
Renewals	Obsolescence and contingencies	Sinking fund				Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
192.70	36.45	114.58	45.82	1,387.34	1,387.34	see page	239
497.09	432.51	540.02	543.70	7,993.64	7,993.64	"	"
253.97	172.92	239.19	206.06	3,450.21	3,450.21	"	"
41.36	28.65	38.67	33.00	653.78	653.78	"	"
814.31	229.58	594.35	578.23	9,421.60	9,421.60	"	"
107.57	109.05	129.76	142.87	1,905.78	1,905.78	"	"
728.50	168.67	473.12	312.67	6,647.96	6,647.96	"	"
511.60	346.26	472.73	397.35	6,624.69	6,624.69	"	"
189.88	127.46	173.99	144.61	2,516.11	2,516.11	"	"
21.10	15.01	20.89	19.11	289.25	289.25	"	"
536.19	208.82	497.30	750.63	8,519.24	8,519.24	"	"
43.24	10.24	27.76	17.80	376.26	376.26	"	"
701.28	416.20	607.06	464.67	9,242.98	9,242.98	"	"
7.26	7.11	8.71	9.55	214.87	214.87	"	"
15.68	7.91	12.26	7.82	165.76	165.76	"	"
252.47	56.48	160.73	97.06	2,146.19	2,146.19	"	"
569.69	130.76	368.91	240.80	5,050.49	5,050.49	"	"
123.44	62.34	96.44	61.45	1,415.62	1,415.62	"	"
473.51	260.63	385.31	265.77	5,500.61	5,500.61	"	"
141.08	31.94	74.28	.....	10,100.55	10,100.55	"	"

## EASTERN ONTARIO

Statement showing the amount to be paid by each Municipality as the Cost—under the received by the Commission from each Municipality on account of such cost; pality upon ascertainment (by annual adjustment) of the actual cost

Municipality	Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Cost of power purchased	Share of operating	
				Operating, maintenance and administrative expenses	Interest
	\$ c.		\$ c.	\$ c.	\$ c.
Newcastle R.P.D.—Clark, Darlington and Manvers twps. ....	14,449.01	48.6	279.83	620.57	664.80
Norwood R.P.D.—Asphodel, Seymour, Methuen and Dummer twps. ....	5,648.79	17.5	100.76	214.75	245.24
Omeme R.F.D.—Ops and Emily twps. ....	830.15	2.5	14.39	42.34	38.27
Oshawa R.P.D.—Pickering, Whitby, Whitby E. and Darlington twps. ....	148,619.50	586.6	3,377.56	6,437.17	6,872.34
Perth R.P.D.—Elmsley N. and Elmsley S. twps. ....	305.67	1.5	8.64	18.70	14.04
Peterborough R.P.D.—Cavan, Monaghan N., Smith, Douro, Otonabee and Monaghan S. twps. ....	101,662.23	478.1	2,752.83	3,697.28	4,668.85
Prescott R.P.D.—Augusta and Edwardsburg twps. ....	18,072.98	95.0	547.00	1,128.95	814.65
Smith's Falls R.P.D.—Crosby S., Bastard, Burgess, Burgess S., Kitley, Montague and Wolford twps. ....	43,527.42	142.1	818.19	1,327.71	1,578.85
Stirling R.P.D.—Rawdon and Sidney twps. ....	7,940.99	37.9	218.22	376.56	346.10
Trenton R.P.D.—Sidney, Murray and Brighton twps. ....	14,247.77	63.4	365.05	451.76	657.09
Warkworth R.P.D.—Percy twp. ....	661.19	2.9	16.70	44.79	30.21
Wellington R.P.D.—Hillier, Ameliasburg, Hallowell, Athol and Murray twps. ....	43,455.69	137.2	789.97	1,472.90	1,999.92
Williamsburg R.P.D.—Matilda and Williamsburg twps. ....	3,705.15	25.4	388.92	414.26	166.85
North Bay R.P.D.—West Ferriss and Widdifield twps. ....	32,244.22	77.8	98.29	1,832.91	1,465.48
Arnprior R.P.D.—Fitzroy twp. ....			1,512.50		
Renfrew R.P.D.—Admaston and Horton twps. ....			330.00		
Totals—Municipalities. ....	8,598,054.99	57,863.4	433,765.02	340,778.17	392,625.38
Totals—Rural Power Districts. ....	940,267.04	4,161.6	33,384.76	38,468.18	42,576.24
Totals—Companies. ....	5,532,695.38	21,102.2	121,503.40	250,011.45	259,289.27
Totals—Public Utilities owned by the Commission. ....	4,069,798.56	10,886.4	49,250.76	249,925.19	187,049.05
	19,140,815.97				
Campbellford Pulp Mill. ....	52,559.93				
Non-operating Capital. ....	62,961.78				
Grand Totals. ....	19,256,337.68	94,013.6	637,903.94	879,182.99	881,539.94

## SYSTEM

## E.O.—COST OF POWER

Power Commission Act—of Power supplied to it by the Commission, the amount and the amount remaining to be credited or charged to each Municipality of power supplied to it in the year ending October 31, 1931.

costs and fixed charges			Cost in excess of revenue from power sold to private companies	Total cost of power for year as provided to be paid under Power Commission Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment	
Renewals	Obsolescence and contingencies	Sinking fund				Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
175.35	100.01	146.33	105.53	2,092.42	2,092.42	see page	239
65.64	35.45	54.01	38.00	753.85	753.85	see page	241
10.75	5.49	8.44	5.43	125.11	125.11	"	"
1,617.63	1,061.11	1,503.59	1,273.70	22,143.10	22,143.10	"	"
3.99	1.16	3.02	3.26	52.81	52.81	"	"
912.28	801.78	1,011.65	1,038.12	14,882.79	14,882.79	"	"
226.34	74.75	178.25	206.28	3,176.22	3,176.22	"	"
488.99	143.42	343.93	308.55	5,009.64	5,009.64	"	"
61.13	61.95	74.30	82.29	1,220.55	1,220.55	"	"
136.30	113.16	142.23	137.66	2,003.25	2,003.25	"	"
6.35	5.20	6.56	6.30	116.11	116.11	"	"
547.42	284.06	440.70	297.91	5,832.88	5,832.88	"	"
50.98	15.64	36.42	33.44	1,106.51	1,106.51	"	"
370.84	225.22			3,992.74	3,992.74	"	"
				1,512.50	1,512.50	"	"
				330.00	330.00	"	"
92,328.16	54,836.12	85,305.82	84,141.73	1,483,780.40	1,499,023.93	38,970.80	23,727.27
10,895.91	5,787.39	8,985.49	7,875.44	147,973.41	147,973.41		
44,940.13	15,187.15	43,325.29	(92,017.17)	642,239.52	642,239.52		
44,082.76	10,384.19	16,554.55		557,246.50	694,173.70	136,927.20	*
192,246.96	86,194.85	154,171.15		2,831,239.83	2,983,410.56		

\*Transferred to credit of obsolescence and contingencies reserve.



## EASTERN ONTARIO SYSTEM—

Statement showing the costs of distribution of power within each Rural Power and the amounts remaining to be credited to certain districts or charged to annual adjustment) of the actual costs

District and municipalities comprised therein:	Total capital cost of each district, Provincial Government grant received and applied thereagainst, and the balance representing the investment by the Commission			Cost of power delivered to districts as shown in "cost of power" table preceding
	Total capital cost	Government grant	Commission's investment	
	\$ c.	\$ c.	\$ c.	\$ c.
Alexandria R.P.D.—Lochiel twp.....	21,119.84	10,559.92	10,559.92	1,387.34
Arnprior R.P.D.—Fitzroy twp.....	9,222.78	4,611.39	4,611.39	1,512.50
Belleville R.P.D.—Sidney, Thurlow, Tyendinaga, and Huntingdon twps.....	141,210.41	70,215.72	70,994.69	7,993.64
Bowmanville R.P.D.—Darlington twp.....	39,974.53	19,987.27	19,987.26	3,450.21
Brighton R.P.D.—Brighton, Cramahe and Murray twps.....	13,876.01	6,938.00	6,938.01	653.78
Brockville R.P.D.—Leeds and Lansdowne front, Escott front, Yonge front, Elizabeth town, Leeds and Lansdowne rear, Augusta, Yonge and Escott rear twps.....	*200,677.75	98,459.99	102,217.76	9,421.60
Campbellford R.P.D.—Seymour and Rawdon twps.....	*34,472.65	17,228.84	17,243.81	1,905.78
Chesterville R.P.D.—Russell, Cambridge, Winchester, Williamsburg, Finch and Osna-bruck twps.....	*89,663.79	42,280.74	47,383.05	6,647.96
Cobourg R.P.D.—Hope, Haldimand, Hamilton and Alnwick twps.....	165,485.34	82,006.46	83,478.88	6,624.69
Colborne R.P.D.—Haldimand and Cramahe twps.....	35,733.28	17,866.64	17,866.64	2,516.11
Fenelon Falls R.P.D.—Fenelon, Somerville, Bexley and Digby twps.....	*36,506.56	17,947.21	18,559.35	289.25
Iroquois R.P.D.—Mountain, Matilda, Williamsburg, Winchester and Gower S. twps.	158,701.43	79,053.72	79,647.71	8,519.24
Kemptville R.P.D.—Oxford twp.....	10,569.92	5,284.96	5,284.96	376.26
Kingston R.P.D.—Ernestown, Portland, Kingston, Loughborough, Pittsburg, and Leeds and Lansdowne front twps.....	182,511.94	90,239.70	92,272.24	9,242.98
Lakefield R.P.D.—Smith and Harvey twps.	*30,359.91	15,107.72	15,252.19	214.87
Lindsay R.P.D.—Ops and Fenelon twps....	*8,808.73	4,398.24	4,410.49	165.76
Martintown R.P.D.—Charlottenburg and Lancaster twps.....	42,134.53	21,067.27	21,067.26	2,146.19
Maxville R.P.D.—Roxborough, Kenyon, Caledonia, Plantagenet N. and Plantagenet S. twps.....	116,967.60	58,483.80	58,483.80	5,050.49
Millbrook R.P.D.—Manvers and Cavan twps	18,582.69	9,007.45	9,575.24	1,415.62
Napanee R.P.D.—Hungerford, Ernestown, Fredericksburg N., Richmond, Camden E., Sheffield and Portland twps.....	*145,507.12	71,661.97	73,845.15	5,500.61
Nepean R.P.D.—March, Nepean, Goulburn, Gower N., Gloucester, Osgoode and Cumberland twps.....	*296,160.73	144,165.15	151,995.58	10,100.55
Newcastle R.P.D.—Clark, Darlington and Manvers twps.....	*36,816.58	17,477.58	19,339.00	2,092.42

NOTE.—Items marked \* include portions of transmission lines used for purposes of rural power districts.

## RURAL POWER DISTRICTS

## E.O.—RURAL OPERATING

District, the revenues collected from (or charged to) customers within each district, the Municipalities comprising certain other districts upon ascertainment (by in the year ending October 31, 1931.

Distribution costs and fixed charges					Total cost	Revenue from power and light customers in each district	Amounts remaining to be credited to certain districts or charged to the municipalities comprising certain other districts	
Cost of operation, maintenance and administration	Interest on capital investment	Renewal charges	Obsolescence and contingencies	Sinking fund			Credited	Charged
\$ c	\$ c.	\$ c	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
602.55	444.06	386.85	193.43	101.84	3,116.07	2,563.14	.....	552.93
370.98	210.35	168.96	84.48	44.48	2,391.75	1,389.19	.....	1,002.56
4,307.52	2,869.76	2,484.45	1,242.23	658.13	19,555.73	23,945.27	4,389.54	.....
1,068.71	700.56	610.30	305.15	160.66	6,295.59	6,721.45	425.86	.....
745.04	189.96	165.49	82.74	43.56	1,880.57	1,670.78	.....	209.79
8,326.92	4,062.16	3,464.63	1,732.32	931.59	27,939.22	28,598.62	659.40	.....
678.47	767.19	668.05	334.02	175.94	4,529.45	4,366.03	.....	163.37
3,321.95	2,150.62	1,771.50	885.75	493.20	15,270.98	15,321.96	50.98	.....
4,394.39	3,632.29	3,132.65	1,566.32	833.01	20,183.35	20,795.57	612.22	.....
1,859.41	786.53	685.20	342.60	180.38	6,370.23	5,489.42	.....	880.81
840.39	283.19	242.03	121.01	64.94	1,840.81	1,430.05	.....	410.76
6,467.59	3,582.77	3,109.31	1,554.66	821.65	24,055.22	26,554.44	2,499.22	.....
471.05	206.96	180.30	90.15	47.46	1,372.18	830.09	.....	542.09
7,267.63	3,822.79	3,306.00	1,653.00	876.71	26,169.11	23,608.14	.....	2,560.97
604.83	165.01	140.87	70.43	37.84	1,233.85	564.70	.....	669.15
295.03	109.05	94.75	47.38	25.01	736.98	420.99	.....	315.99
1,334.88	832.63	725.36	362.68	190.95	5,592.69	5,898.94	306.25	.....
2,852.14	2,436.27	2,122.39	1,051.20	558.72	14,081.21	14,030.39	.....	50.82
804.31	429.28	365.46	182.73	98.45	3,295.85	2,725.70	.....	570.15
4,427.73	2,870.37	2,461.10	1,230.55	658.27	17,148.63	13,463.67	.....	3,684.96
9,002.69	5,720.94	4,827.28	2,413.64	1,312.01	33,377.11	36,606.81	3,229.70	.....
995.77	876.76	726.58	363.29	201.08	5,255.90	5,733.47	477.57	.....

## EASTERN ONTARIO SYSTEM—

Statement showing the costs of distribution of power within each Rural Power and the amounts remaining to be credited to certain districts or charged to annual adjustment) of the actual costs

District and municipalities comprised therein:	Total capital cost of each district, Provincial Government grant received and applied thereagainst, and the balance representing the investment by the Commission			Cost of power delivered to districts as shown in "cost of power" table preceding
	Total capital cost	Government grant	Commission's investment	
	\$ c.	\$ c.	\$ c.	\$ c.
<b>North Bay</b> R.P.D.—West Ferris and Widdifield twps.....	27,637.51	13,467.23	14,170.28	3,992.74
<b>Norwood</b> R.P.D.—Asphodel, Seymour, Methuen and Dummer twps.....	16,461.61	8,230.80	8,230.81	753.85
<b>Omeme</b> R.P.D.—Ops and Emily twps.....	3,612.50	1,806.25	1,806.25	125.11
<b>Oshawa</b> R.P.D.—Pickering, Whitby, Whitby E. and Darlington twps.....	222,561.12	108,132.83	114,428.29	22,143.10
<b>Perth</b> R.P.D.—Elmsley N. and Elmsley S. twps.....	17,379.42	8,689.71	8,689.71	52.81
<b>Peterborough</b> R.P.D.—Cavan, Monaghan, N. Smith, Douro, Otonabee and Monaghan S. twps.....	*161,588.85	80,790.44	80,798.41	14,882.79
<b>Prescott</b> R.P.D.—Augusta and Edwardsburg twps.....	69,739.95	34,686.47	35,053.48	3,176.22
<b>Renfrew</b> R.P.D.—Admaston and Horton twps.....	7,550.02	3,775.01	3,775.01	330.00
<b>Smiths Falls</b> R.P.D.—Crosby S., Bastard, Burgess S., Kitley, Montague and Wolford twps.....	106,278.24	51,768.06	54,510.18	5,009.64
<b>Stirling</b> R.P.D.—Rawdon and Sidney twps.....	*51,696.87	22,960.37	28,736.50	1,220.55
<b>Trenton</b> R.P.D.—Sidney, Murray and Brighton twps.....	*72,606.69	36,209.96	36,396.73	2,003.25
<b>Warkworth</b> R.P.D.—Percy twp.....	*1,598.38	612.42	985.96	116.11
<b>Wellington</b> R.P.D.—Hillier, Ameliasburg, Hallowell, Athol and Murray twps.....	*162,318.64	80,645.95	81,672.69	5,832.88
<b>Williamsburg</b> R.P.D.—Matilda and Williamsburg twps.....	22,957.98	11,478.99	11,478.99	1,106.51
	2,779,051.90	1,367,304.23	1,411,747.67	
Non-operating capital.....	41,760.08	20,620.16	21,139.92	
<b>Totals</b> .....	2,820,811.98	1,387,924.39	1,432,887.59	147,973.41

NOTE.—Items marked \* include portions of transmission lines aggregating \$22,947.72 used for purposes of rural power districts.



## RURAL POWER DISTRICTS

*E.O.—RURAL OPERATING*

District, the revenues collected from (or charged to) customers within each district, the Municipalities comprising certain other districts upon ascertainment (by in the year ending October 31, 1931.

Distribution costs and fixed charges					Total cost	Revenue from power and light customers in each district	Amounts remaining to be credited to certain districts or charged to the municipalities comprising certain other districts	
Cost of operation, maintenance and administration	Interest on capital investment	Renewal charges	Obsolescence and contingencies	Sinking fund			Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,082.83	478.60	405.34	202.66	109.88	6,272.05	8,018.23	1,746.18	.....
590.52	349.24	304.25	152.12	80.09	2,230.07	1,701.95	.....	528.12
16.22	74.41	64.82	32.41	17.06	330.03	207.03	.....	123.00
13,531.66	4,970.26	4,217.56	2,108.78	1,139.85	48,111.21	54,541.78	6,430.57	.....
434.66	65.73	57.26	28.63	15.07	654.16	210.47	.....	443.69
7,231.08	3,427.69	2,985.92	1,492.96	786.08	30,806.52	30,757.67	.....	48.85
3,783.74	1,511.17	1,309.14	654.57	346.55	10,781.39	10,829.18	47.79	.....
255.71	187.29	110.44	55.22	29.07	967.73	544.98	.....	422.75
5,155.70	2,410.32	2,048.14	1,024.07	552.77	16,200.64	15,327.05	.....	873.59
1,353.65	1,272.12	1,007.92	503.96	291.75	5,649.95	4,971.24	.....	678.71
2,271.48	1,494.65	1,298.35	649.18	342.79	8,059.70	8,169.73	110.03	.....
77.03	43.30	30.25	15.13	9.93	291.75	315.40	23.65	.....
4,634.42	3,266.79	2,828.29	1,414.15	749.20	18,725.73	16,469.74	.....	2,255.99
873.21	504.55	439.55	219.77	115.72	3,259.31	2,691.33	.....	567.98
102,331.89	57,205.62	48,946.74	24,473.37	13,101.69	394,032.72	397,484.65	21,008.96	17,557.03
Net credit.....							\$3,451.93	

## EASTERN ONTARIO

Statement showing the net Credit or Charge to each Municipality in respect of power made and interest added during the year. Also the net amount credited ending October 31, 1931, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1930		Cash receipts and payments on account of such credits and charges, also adjust- ments made during the year	
		Credit	Charge	Credited	Charged
		\$ c.	\$ c.	\$ c.	\$ c.
Alexandria.....	Jan., 1921		429.41	429.41	
Apple Hill.....	April, 1921		106.89	106.89	
Athens.....	Jan., 1929	2,022.94			2,022.94
Belleville.....	April, 1929	7,399.96			7,399.96
Bloomfield.....	April, 1919	380.24			380.24
Brighton.....	Nov., 1929		220.92	220.92	
Brockville.....	April, 1915		1,541.38	1,541.38	
Cardinal.....	July, 1930		400.51	400.51	
Carleton Place.....	May, 1919	3,605.11			3,605.11
Chesterville.....	April, 1914	39.25			39.25
Deseronto.....	Jan., 1931				
Finch.....	Feb., 1928	112.23			112.23
Hastings.....	June, 1931				
Havelock.....	Feb., 1921	466.51			466.51
Kemptville.....	Dec., 1921	867.95			867.95
Lakefield.....	Aug., 1920	1,771.88			1,771.88
Lanark.....	Sept., 1921	608.23			608.23
Lancaster.....	May, 1921		8,085.86	500.00	
Lindsay.....	Mar., 1928	1,678.94			1,678.94
Madoc.....	Jan., 1930		1,084.67	1,084.67	
Marmora.....	Jan., 1921	274.02			274.02
Martintown.....	May, 1921		8.17	8.17	
Maxville.....	Feb., 1921	1,031.20			1,031.20
Napanee.....	Nov., 1929	53.34			53.34
Norwood.....	Feb., 1921	111.45			111.45
Oshawa.....	Feb., 1929	603.01			603.01
Ottawa.....	Jan., 1914	6,771.42			6,771.42
Perth.....	Feb., 1919	4,926.33			4,926.33
Peterborough.....	Mar., 1913	10,783.80			10,997.70
Pictou.....	April, 1919	3,650.14			3,650.14
Port Hope.....	Nov., 1929	2,805.61			2,805.61
Prescott.....	Dec., 1913	80.03			80.03
Richmond.....	Aug., 1928	725.72			725.72
Russell.....	Feb., 1926	509.26			509.26
Smiths Falls.....	Sept., 1918	8,392.63			8,392.63
Stirling.....	Jan., 1930		423.07	423.07	
Tweed.....	Dec., 1930				
Warkworth.....	Oct., 1923	404.87			404.87
Wellington.....	April, 1919	858.31			858.31
Whitby.....	Jan., 1926	2,272.14			2,272.14
Williamsburg.....	April, 1915	291.42			291.42
Winchester.....	Jan., 1914	707.47			707.47

\*For townships included in rural power districts see "Cost of Power" and "Rural Operating" statements preceding.

## SYSTEM

*E.O.—CREDIT OR CHARGE*

supplied to it to October 31, 1930, the cash receipts and payments thereon, adjustments or charged to each Municipality in respect of power supplied in the year as a credit or charge to each Municipality at October 31, 1931

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1931		Accumulated amount standing as a credit or charge on October 31, 1931	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	7.91	.....	402.90	.....	410.81
.....	1.60	.....	.....	.....	.....
40.35	.....	1,693.89	.....	105.50	.....
127.32	.....	1,757.84	.....	1,734.24	.....
7.55	.....	269.82	.....	1,885.16	.....
.....	.....	.....	.....	277.37	.....
.....	4.50	.....	942.26	.....	946.76
.....	30.91	1,169.15	.....	1,138.24	.....
.....	14.88	257.80	.....	242.92	.....
79.72	.....	4,366.33	.....	4,446.05	.....
0.74	.....	.....	538.53	.....	537.79
.....	.....	696.94	.....	696.94	.....
2.13	.....	.....	4.90	.....	2.77
.....	.....	.....	613.17	.....	613.17
9.25	.....	53.85	.....	63.10	.....
17.22	.....	.....	96.08	.....	78.86
.....	.....	1,314.32	.....	1,355.96	.....
41.64	.....	262.88	.....	274.14	.....
11.26	.....	1,301.62	.....	.....	6,595.56
.....	311.32	579.17	.....	597.65	.....
18.48	.....	.....	351.24	.....	370.97
.....	19.73	.....	.....	.....	.....
5.80	.....	37.04	.....	42.84	.....
.....	0.22	.....	55.78	.....	56.00
17.82	.....	1,077.32	.....	1,095.14	.....
1.06	.....	1,059.93	.....	1,060.99	.....
2.36	.....	.....	85.33	.....	82.97
.....	.....	.....	.....	.....	.....
11.99	.....	.....	18,816.33	.....	18,804.34
129.86	.....	5,072.22	.....	5,202.08	.....
89.92	.....	5,334.17	.....	5,424.09	.....
213.90	.....	4,527.53	.....	4,527.53	.....
72.40	.....	.....	1,372.15	.....	1,299.75
.....	.....	943.44	.....	996.63	.....
53.19	.....	826.61	.....	828.35	.....
1.74	.....	317.34	.....	331.97	.....
14.63	.....	314.56	.....	324.66	.....
10.10	.....	4,681.33	.....	4,855.35	.....
174.02	.....	.....	.....	.....	.....
.....	8.35	.....	79.20	.....	87.55
.....	.....	.....	301.96	.....	301.96
7.09	.....	342.35	.....	349.44	.....
15.18	.....	219.66	.....	234.84	.....
37.85	.....	.....	67.44	.....	29.59
.....	.....	80.79	.....	86.85	.....
6.06	.....	305.80	.....	320.08	.....
14.28	.....	.....	.....	.....	.....



## EASTERN ONTARIO

Statement showing the net Credit or Charge to each Municipality in respect of power made and interest added during the year. Also the net amount credited ending October 31, 1931, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1930		Cash receipts and payments on account of such credits and charges, also adjustments made during the year	
		Credit	Charge	Credited	Charged
RURAL POWER DISTRICTS		\$	c.	\$	c.
Alexandria R.P.D.	Dec., 1929		1,235.62		
Arnprior R.P.D.	Dec., 1930				
Belleville R.P.D.	Aug., 1927	13,217.16			
Bowmanville R.P.D.	Jan., 1924	197.67			
Brighton R.P.D.	Nov., 1929		44.41		
Brockville R.P.D.	Nov., 1921	562.27			
Campbellford R.P.D.	Aug., 1924		684.12		
Chesterville R.P.D.	Nov., 1921	5,303.95			
Cobourg R.P.D.	Feb., 1927	1,649.32			
Colborne R.P.D.	Aug., 1925	2,227.51			80.00
Fenelon Falls R.P.D.	July, 1931				
Iroquois R.P.D.	July, 1930		1,067.74		
Kemptville R.P.D.	Dec., 1930				
Kingston R.P.D.	Jan., 1923		1,596.69		76.36
Lakefield R.P.D.	July, 1928		25.16		
Lindsay R.P.D.	July, 1930		28.99		
Martintown R.P.D.	Jan., 1922	441.40			
Maxville R.P.D.	Dec., 1927		487.26		23.49
Millbrook R.P.D.	July, 1930		251.41		
Napanee R.P.D.	Nov., 1927	513.98			
Nepean R.P.D.	Feb., 1922	4,795.40			578.21
Newcastle R.P.D.	Sept., 1927	986.65			
North Bay R.P.D.	June, 1927	3,960.36			
Norwood R.P.D.	Jan., 1929		332.02		
Omeme R.P.D.	Jan., 1931				
Oshawa R.P.D.	April, 1918	25,892.66			31.39
Perth R.P.D.	Aug., 1931				
Peterborough R.P.D.	Jan., 1927	11,481.20			
Prescott R.P.D.	June, 1922	883.73			1,156.73
Renfrew R.P.D.	Nov., 1930				
Smiths Falls R.P.D.	May, 1929		2,289.03		
Stirling R.P.D.	Nov., 1929		78.26		
Trenton R.P.D.	Jan., 1924	2,162.71			
Warkworth R.P.D.	Nov., 1928		38.10	22.08	
Wellington R.P.D.	Nov., 1925		266.21		22.08
Williamsburg R.P.D.	Feb., 1923		831.45		
Totals		138,486.38	21,557.35	4,737.10	66,392.57

\*For townships included in rural power districts see "Cost of Power" and "Rural Operating" statements preceding.

## SYSTEM

## E.O.—CREDIT OR CHARGE

supplied to it to October 31, 1930, the cash receipts and payments thereon, adjustments or charged to each Municipality in respect of power supplied in the year as a credit or charge to each Municipality at October 31, 1931

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1931		Accumulated amount standing as a credit or charge on October 31, 1931	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
	49.42		552.93		1,837.97
			1,002.56		1,002.56
528.69		4,389.54		18,135.39	
7.91		425.86		631.44	
	1.78		209.79		255.98
22.49		659.40		1,244.16	
	27.36		163.37		874.85
212.16		50.98		5,567.09	
65.97		612.22		2,327.51	
89.10			880.81	1,355.80	
			410.76		410.76
	42.71	2,499.22		1,388.77	
			542.09		542.09
	65.92		2,560.97		4,299.94
	1.01		669.15		695.32
	1.16		315.99		346.14
17.66		306.25		765.31	
	20.12		50.82		581.69
	10.06		570.15		831.62
20.55			3,684.96		3,150.43
178.22		3,229.70		7,625.11	
39.47		477.57		1,503.69	
158.41		1,746.18		5,864.95	
	13.28		528.12		873.42
			123.00		123.00
1,035.15		6,430.57		33,326.99	
			443.69		443.69
459.25			48.85	11,891.60	
0.74		47.79			224.47
			422.75		422.75
	91.56		873.59		3,254.18
	3.13		678.71		760.10
86.51		110.03		2,359.25	
	0.99	23.65		6.64	
	11.18		2,255.99		2,555.46
	33.26		567.98		1,432.69
4,157.19	772.36	59,979.76	41,284.30	132,491.81	55,137.96

## EASTERN ONTARIO SYSTEM

## Reserve for Renewals, October 31, 1931

Total provision for renewals to October 31, 1930.....	\$3,477,726.19	
Deduct expenditures to October 31, 1930.....	837,719.75	
Balance brought forward at October 31, 1930.....	\$2,640,006.44	
Added during the year ending October 31, 1931:		
Amounts charged to municipalities and rural power districts as part of the cost of power delivered to them.....	\$103,224.07	
Amounts included in the costs of distribution of power within rural power districts.....	48,946.74	
Provision against equipment employed in respect of contracts with private companies, which purchased power, and against equipment in local distribution systems and pulp mill	90,074.09	
Reserve provided in respect of equipment and rural lines purchased.....	8,177.00	
Interest at 4% per annum on the monthly balances at the credit of the account.....	105,207.54	
		355,629.44
		<u>\$2,995,635.88</u>
Deduct:		
Expenditures during the year ending October 31, 1931.....	\$28,423.93	
Accumulated reserves for renewals in respect of local distribution systems sold to municipalities during the year—employed to write down the book values of such local distribution systems.....	16,641.91	
		45,065.84
Balance carried forward October 31, 1931.....	\$2,950,570.04	



## EASTERN ONTARIO SYSTEM

## Reserve for Obsolescence and Contingencies, October 31, 1931

Balance brought forward at October 31, 1930.....\$1,010,209.01

Added during the year ending October 31, 1931:

Amounts charged to municipalities and rural power districts as part of the cost of power delivered to them.....	\$60,623.51	
Amount included in the costs of distribution of power within rural power districts.....	24,473.37	
Provision against equipment employed in respect of contracts with private companies, which purchased power, and local distribution systems.....	25,571.34	
Net profit from operation of local distribution systems and utilities, and from the sale of old equipment.....	102,746.79	
Interest at 4% per annum on monthly balances at the credit of the account.....	40,408.36	
		253,823.37
		<u>\$1,264,032.38</u>

Deduct:

Contingencies met with during the year ending October 31, 1931..... 9,164.05

Balance carried forward October 31, 1931.....\$1,254,868.33

## EASTERN ONTARIO SYSTEM

## SINKING FUND

Statement showing Sinking Fund paid by each municipality in the periods mentioned hereunder as part of the cost of power delivered thereto, together with its proportionate share of other Sinking Funds, provided out of other revenues of the system, and interest allowed thereon to October 31, 1931

Municipality	Period of years ending Oct. 31, 1931	Amount	Rural Power District	Period of years ending Oct. 31, 1931	Amount
		\$ c.			\$ c.
Alexandria.....	7 years	13,868.19	RURAL POWER DISTRICTS*		
Apple Hill.....	7 "	1,310.62	Alexandria R.P.D.....	2 years	374.91
Athens.....	3 "	1,454.76	Arnprior R.P.D.....	1 "	44.48
Belleville.....	3 "	35,261.87	Belleville R.P.D.....	3 "	3,753.60
Bloomfield.....	3 "	1,686.29	Bowmanville R.P.D.....	3 "	758.67
Brighton.....	2 "	2,032.82	Brighton R.P.D.....	2 "	172.23
Brockville.....	11 "	70,981.87	Brockville R.P.D.....	10 "	6,045.51
Cardinal.....	2 "	529.27	Campbellford R.P.D.....	3 "	1,123.21
Carleton Place.....	7 "	30,458.75	Chesterville R.P.D.....	10 "	3,946.61
Chesterville.....	12 "	14,334.56	Cobourg R.P.D.....	3 "	4,241.02
Deseronto.....	1 "	643.06	Colborne R.P.D.....	3 "	1,108.73
Finch.....	4 "	1,232.02	Fenelon Falls R.P.D.....	1 "	98.26
Hastings.....	1 "	151.82	Iroquois R.P.D.....	2 "	2,468.86
Havelock.....	3 "	3,834.64	Kemptville R.P.D.....	1 "	86.81
Kemptville.....	7 "	7,343.80	Kingston R.P.D.....	3 "	2,949.84
Lakefield.....	3 "	2,828.71	Lakefield R.P.D.....	3 "	61.97
Lanark.....	7 "	2,324.04	Lindsay R.P.D.....	2 "	46.52
Lancaster.....	7 "	3,316.20	Martintown R.P.D.....	10 "	3,040.43
Lindsay.....	3 "	21,842.26	Maxville R.P.D.....	4 "	2,558.68
Madoc.....	2 "	1,244.51	Millbrook R.P.D.....	2 "	312.01
Marmora.....	3 "	1,341.16	Napanee R.P.D.....	3 "	1,695.17
Martintown.....	7 "	830.02	Nepean R.P.D.....	10 "	6,565.20
Maxville.....	7 "	3,874.96	Newcastle R.P.D.....	3 "	821.95
Napanee.....	2 "	7,698.57	North Bay R.P.D.....	2 "	207.57
Norwood.....	3 "	1,838.68	Norwood R.P.D.....	3 "	282.98
Oshawa.....	3 "	119,283.82	Omeme R.P.D.....	1 "	29.03
Ottawa.....	16 "	23,115.16	Oshawa R.P.D.....	3 "	9,627.12
Perth.....	7 "	25,212.54	Perth R.P.D.....	1 "	20.21
Peterborough.....	3 "	76,277.22	Peterborough R.P.D.....	3 "	7,478.57
Pictou.....	3 "	12,578.55	Prescott R.P.D.....	10 "	4,318.06
Port Hope.....	2 "	9,981.65	Renfrew R.P.D.....	1 "	29.07
Prescott.....	12 "	19,492.45	Smiths Falls R.P.D.....	3 "	2,091.06
Richmond.....	4 "	387.52	Stirling R.P.D.....	2 "	493.59
Russell.....	6 "	2,166.89	Trenton R.P.D.....	3 "	700.47
Smiths Falls.....	8 "	40,591.43	Warkworth R.P.D.....	3 "	44.02
Stirling.....	2 "	1,553.43	Wellington R.P.D.....	3 "	1,982.58
Tweed.....	1 "	839.41	Williamsburg R.P.D.....	7 "	380.57
Warkworth.....	3 "	895.96			
Wellington.....	3 "	2,337.42			
Whitby.....	3 "	12,578.30			
Williamsburg.....	11 "	1,643.34			
Winchester.....	12 "	8,557.75			
					659,715.86

\*For townships included in rural power districts see "Cost of Power" and "Rural Operating" statements preceding.

**EASTERN ONTARIO SYSTEM****Reserve for Sinking Fund, October 31, 1931**

Total provision for sinking fund to October 31, 1930..... \$473,502.91

Provided in the year ending October 31, 1931:

By charges included in the cost of power delivered to municipalities and rural power districts.....	\$94,291.31	
By charges included in the costs of distribution of power within rural power districts.....	13,101.69	
By charges against contracts with private companies which purchased power, and local distribution systems.....	59,879.84	
Interest at 4% per annum on the amount standing at the credit of the account.....	18,940.11	186,212.95
		<u>\$659,715.86</u>



THUNDER BAY

Operating Account for the Year

COSTS OF OPERATION AS PROVIDED FOR UNDER THE TERMS OF THE POWER COMMISSION ACT		
Cost of operating and maintaining generating plants, transformer stations and transmission lines, including the proportion of administrative expenses chargeable to the operation of the system.....	\$217,397.15	
Interest on capital investment.....	879,477.46	
Provision for renewal of generating plants, transformer stations and transmission lines.....	151,173.65	
Provision for sinking fund:		
By charges included in the cost of power delivered to municipalities.....	\$98,807.09	
By charges against contracts with private companies which purchased power.....	37,006.04	
		135,813.13
		<u>\$1,383,861.39</u>

THUNDER BAY

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such cost; upon ascertainment (by annual adjustment) of the actual

Municipality	Interim rates per horsepower collected by Commission during year	Share of capital cost of system on which interest and fixed charges are payable	Average horsepower supplied in year after correction for power factor	Share of operating	
				Operating, maintenance and administrative expenses	Interest
	To Oct. 31, 1931				
		\$ c.		\$ c.	\$ c.
Fort William.....	\$21.00 plus transformation charges...	3,212,837.42	10,511.3	39,728.04	153,683.32
Port Arthur.....	\$21.00 plus transformation charges...	10,132,285.01	33,628.1	120,913.55	484,446.22
Township of Nipigon....	\$35.00.....	18,466.89	65.1	546.29	883.94
Totals—Municipalities.....		13,363,589.32	44,204.5	161,187.88	639,013.48
Totals—Companies.....		5,003,672.84	17,117.9	56,209.27	240,463.98
		18,367,262.16			
Non-operating capital.....		39,101.23			
Grand totals.....		18,406,363.39	61,322.4	217,397.15	879,477.46

## SYSTEM

ending October 31, 1931

## REVENUE FOR PERIOD

Collected from municipalities.....	\$981,976.76	
Power sold to private companies.....	357,069.87	
		<u>\$1,339,046.63</u>
Add:		
Amounts due by certain municipalities, being the difference between the sums paid and the cost of power supplied them in the year.....	45,353.56	
		<u>\$1,384,400.19</u>
Deduct:		
Amounts collected from certain municipalities in excess of the sum required to be paid by them for power supplied in the period.....	538.80	
Revenue.....	<u>\$1,383,861.39</u>	
		<u><u>\$1,383,861.39</u></u>

## SYSTEM

T.B.—COST OF POWER

the Power Commission Act—of Power supplied to it by the Commission; the amount and the amount remaining to be credited or charged to each Municipality cost of power supplied to it in the year ending October 31, 1931

costs and fixed charges		Cost in excess of revenue from power sold to private companies	Total cost of power for year as provided to be paid under Power Commission Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment	
Renewals	Sinking fund				Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
26,866.41	23,753.29	4,033.18	248,064.24	237,002.95	.....	11,061.29
83,807.83	74,917.20	12,903.08	776,987.88	742,695.61	.....	34,292.27
147.59	136.60	24.98	1,739.40	2,278.20	538.80	.....
110,821.83	98,807.09	16,961.24	1,026,791.52	981,976.76	538.80	45,353.56
40,351.82	37,005.04	(16,961.24)	357,069.87	357,069.87	.....	.....
151,173.65	135,813.13	.....	1,383,861.39	1,339,046.63	.....	.....

## THUNDER BAY

Statement showing the net Credit to each municipality in respect of power supplied during the year; also the net amount Credited or Charged to each Municipality accumulated amount standing as a Credit or Charge

Municipality	Date commenced operating	Net credit at October 31, 1930	Payments on account of such credits, also adjustments made during the year	
		Credit	Credited	Charged
		\$ c.	\$ c.	\$ c.
Fort William.....	Oct., 1926	496.54	.....	238.90
Nipigon twp.....	Jan., 1925	583.56	.....	589.05
Port Arthur.....	Dec., 1910	1,983.61	.....	494.18
Totals.....	.....	3,063.71	.....	1,322.13

## THUNDER BAY SYSTEM

## Reserve for Renewals, October 31, 1931

Total provision for renewals to October 31, 1930.....	\$776,360.55
Deduct:	
Expenditures to October 31, 1930.....	2,156.62
Balance brought forward October 31, 1930.....	\$774,203.93
Added during the year ending October 31, 1931:	
Amounts charged to municipalities as part of the cost of power delivered to them.....	\$110,821.83
Provision against equipment employed in respect of contracts with private companies which purchased power.....	40,351.82
Interest at 4% per annum on monthly balances at the credit of the account.....	30,968.16
	182,141.81
	\$956,345.74
Deduct:	
Expenditures during the year ending October 31, 1931.....	1,201.94
Balance carried forward October 31, 1931.....	\$955,143.80

## THUNDER BAY SYSTEM

## SINKING FUND

Statement showing Sinking Fund paid by each Municipality in the periods mentioned hereunder as part of the cost of power delivered thereto, together with its proportionate share of other Sinking Funds, provided out of other revenues of the system and interest allowed thereon to October 31, 1931

Municipality	Period of years ending October 31, 1931	Amount
		\$ c.
Fort William.....	5 years	158,980.96
Nipigon twp.....	5 "	888.07
Port Arthur.....	5 "	561,664.61
		721,533.64



## SYSTEM

T.B.—CREDIT OR CHARGE

to it to October 31, 1930, payments thereon, adjustments made and interest added pality in respect of power supplied in the year ending October 31, 1931, and to each Municipality at October 31, 1931

Interest at 4% per annum added during the year	Net amount credited or charged in respect of power supplied in the year ending October 31, 1931		Accumulated amount standing as a credit or charge on October 31, 1931	
Credited	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
20.15	.....	11,061.29	.....	10,783.50
12.77	538.80	.....	546.08	.....
97.39	.....	34,292.27	.....	32,705.45
130.31	538.80	45,353.56	546.08	43,488.95

## THUNDER BAY SYSTEM

## Reserve for Obsolescence and Contingencies, October 31, 1931

Balance brought forward October 31, 1930.....	\$828,595.58
Added during the year ending October 31, 1931:	
Additional amounts charged to municipalities as part of the cost of power delivered to them in the year ending October 31, 1930.....	\$44,615.06
Additional provision against equipment employed in respect of contracts with private companies in the year ending October 31, 1930.....	15,384.94
Interest at 4% per annum on monthly balances at the credit of the account.....	35,543.82
	95,543.82
	\$924,139.40
Deduct:	
Expenditures during the year ending October 31st, 1931.....	3,500.00
Balance carried forward October 31, 1931.....	\$920,639.40

## THUNDER BAY SYSTEM

## Reserve for Sinking Fund, October 31, 1931

Total provision for sinking fund to October 31, 1930.....	\$563,192.80
Provided in the year ending October 31, 1931:	
By charges included in the cost of power delivered to municipalities.....	\$98,807.09
By charges against contracts with private companies which purchased power.....	37,006.04
Interest at 4% per annum on amounts standing at the credit of the reserve account.....	22,527.71
	158,340.84
Total.....	\$721,533.64

## SUDBURY DISTRICT—

## Operating Account for the

## COST OF OPERATION

Cost of operating and maintaining generating plants, transmission lines and stations, including water rentals and the proportion of administrative expenses of the Commission chargeable to the operation of the properties.....	\$101,871.57
Engineering and other expenses in connection with arrangements for an additional supply of power for this district.....	6,935.62
Interest on the capital investment of the Commission in the Wahnapiatae properties	128,423.58
Provision for renewals.....	26,874.94
	<u>\$264,105.71</u>
Purchase of flooding rights and settlement of claims for damages, due to high water in Wahnapiatae Lake.....	29,682.18
Surplus—transferred to contingencies reserve.....	43,386.44
	<u><u>\$337,174.33</u></u>

## ABITIBI—

## Operating Account for the

## COST OF OPERATION

Power purchased.....	\$27,083.33
Cost of operating and maintaining transmission line and metering station.....	2,804.32
Interest on the capital investment of the Commission in the Abitibi line and station for the month of October, 1931.....	8,028.92
	<u>\$37,916.57</u>

## PATRICIA DISTRICT—

## Operating Account for the

## COST OF OPERATION

Cost of operating and maintaining generating plant at Ear Falls, including water rentals and the proportion of administrative expenses chargeable to the operation of the plant.....	\$15,896.31
Interest on Commission's investment in the plant.....	23,912.12
Portion of the interest on the investment in plant, for the broken operating period of ten months to October 31, 1930, brought forward.....	4,391.97
Surplus—Transferred to renewals reserve.....	5,674.60
	<u><u>\$49,875.00</u></u>

**WAHNA PITAE PROPERTIES****Year Ending October 31, 1931****REVENUE FOR PERIOD**

Power sold at fixed rates to private consumers and municipalities..... \$337,174.33

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\$337,174.33

**SUDBURY DISTRICT****Reserve for Obsolescence and Contingencies—October 31, 1931**

Balance brought forward at October 31, 1930.....		\$10,582.50
Added during the year ending October 31, 1931.....	\$43,386.44	
Interest at 4 per cent. per annum on monthly balances at the credit of the account.....	423.30	
		<hr/> 43,809.74
Balance carried forward, October 31, 1931.....		<hr/> <hr/> \$54,392.24

**SUDBURY LINE****Month of October, 1931****REVENUE FOR PERIOD**

Power sold at fixed rate to a private company.....	\$24,000.00
Excess of operating expense over revenue for the broken period ending October 31, 1931.....	13,916.57
	<hr/> \$37,916.57

**(EAR FALLS GENERATING PLANT)****Year Ending October 31, 1931****REVENUE FOR PERIOD**

Power sold to private consumer..... \$49,875.00

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\$49,875.00



## HYDRO-ELECTRIC POWER

## Account

## The Provincial

## For the Year ending

## Niagara and

Apr. 29, 1931	Cash returned to the Province in the year ending October 31, 1931, to cover the difference between advances by the Province to the Commission and the capital expenditures made out of such advances by the Commission, in the year ending October 31, 1930...		\$388,712.70
Oct. 31, 1931	Repayment to the Province of the investment—according to book values—in the distribution systems in Deseronto and Tweed (in the former Central Ontario System) upon the sale of these properties to the municipalities.		48,790.12
April 29, and Oct. 31, 1931	Repayment to the Province of advances in respect of the Commission's investment in the distribution systems in Walkerton, Southampton, Wiarton and Port Elgin, upon the sale of these properties to the municipalities, for the aggregate sum of.....		121,000.00
April 30, 1931	Paid on account of interest.....	\$4,621,182.52	
Oct. 31, 1931	Cheque to cover balance of interest for year ending October 31, 1931.....	4,649,502.27	
			9,270,684.79
Oct. 31, 1931	Payment under debt retirement plan.....		1,775,462.09
Oct. 31, 1931	Balance carried down.....		188,377,180.39
			<u>\$199,981,830.09</u>

## GUELPH

## Operating Account for

## EXPENDITURE

Transportation expense.....	\$26,562.15	
Maintenance—way and structures.....	6,914.31	
Maintenance—equipment.....	17,192.63	
Electric power and motor fuel.....	12,256.30	
General operating and management expenses.....	8,493.13	
Proportion of administrative and accounting expenses of the Commission chargeable to the operation of the railway.....	2,527.23	
Insurance.....	4,338.54	
Taxes.....	363.06	
		\$78,647.35
Interest.....		15,254.05
Provision for instalments payable to the city of Guelph on May 1, 1931, and November 1, 1931, under purchase agreement:		
Interest for year.....	\$4,060.47	
On account of principal.....	7,639.53	
		11,700.00
Provision for sinking fund.....		1,579.50
		<u>\$107,180.90</u>

## COMMISSION OF ONTARIO

with

Treasurer

October 31, 1931

## Other Systems

Oct. 31, 1930	Cash advances to date for the purposes of Niagara and other Power Systems.....	\$187,474,476.18	
	Less repayments to that date under debt retire- ment plan.....	10,675,033.88	
			<u>\$176,799,442.30</u>
Nov. 1, 1930 to Oct. 31, 1931	Sundry cash advances.....		13,911,703.00
Oct. 31, 1931	Interest for year on all cash advances.....	\$9,781,290.46	
	Less—Interest credited by Province on repay- ments made by Commission.....	510,605.67	
			<u>9,270,684.79</u>
			<u><u>\$199,981,830.09</u></u>
Nov. 1, 1931	Total cash advances.....	\$200,827,676.36	
	Less—Payments made under debt retirement plan.....	12,450,495.97	
			<u><u>\$188,377,180.39</u></u>

## RADIAL RAILWAY

the Year Ending October 31, 1931

## REVENUE

Operating revenue.....	\$77,532.40
Net deficit for year paid by the city of Guelph.....	29,648.50
	<u>\$107,180.90</u>

## Reserve for Renewals, October 31, 1931

Total provision for renewals to October 31, 1930.....	\$53,329.65
Deduct:	
Expenditures to October 31, 1930.....	22,915.16
Balance brought forward October 31, 1930.....	\$30,414.49
Added during the year ending October 31, 1931:	
Interest at 4 per cent. on the monthly balances to the credit of the account....	1,216.58
	<u><u>\$31,631.07</u></u>

# APPROPRIATIONS, ADVANCES AND CAPITAL EXPENDITURES

For the year ending October 31, 1931

Appropriations made by the Legislature for the purposes of the Commission, Cash Advances by the Province to the Commission on account of such appropriations, and the Capital Expenditures made on each Undertaking and System by the Commission out of such Cash Advances in the Year Ending October 31, 1931

## NIAGARA SYSTEM

### Appropriations by Legislature:

For power developments.....	\$5,680,000.00
For transformer and distributing stations.....	6,365,000.00
For transmission and distribution lines.....	6,000,000.00
	<u>\$18,045,000.00</u>

Cash advances to the Commission out of such appropriations.....	\$9,412,717.00
Unexpended balance as at October 31, 1931, returnable to Province.....	<u>710,070.49</u>
	\$8,702,646.51

### Capital expenditure by the Commission:

On Queenston-Chippawa development.....	\$38,669.20
On Chats Falls development.....	2,698,472.33
On right-of-way.....	13,128.91
On steel-tower lines.....	107,925.91
On wood-pole lines.....	71,607.71
On transformer stations.....	698,912.27
On Eastern transmission lines.....	2,041,257.74
On Eastern transformer stations.....	2,160,983.71
On rural power districts.....	873,318.73
	<u>\$8,704,276.51</u>

### On Ontario Power generating plant:

Receipts in excess of expenditures.....	\$280.00
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### On Electric Power generating plant:

Receipts in excess of expenditures.....	<u>1,350.00</u>
	1,630.00

Total.....	<u>\$8,702,646.51</u>
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### GEORGIAN BAY SYSTEM

Appropriations by Legislature .....	\$1,510,000.00	
Cash advances to the Commission out of such appropriations .....	\$434,008.00	
Deduct—Amount returned to Provincial Treasurer during year, being amount realized from sale of distribution systems to Walkerton, Southampton, Wiarton and Port Elgin, respectively .....	121,000.00	
	\$313,008.00	
Unexpended balance as at October 31, 1931, returnable to Province ..	50,229.50	\$262,778.50
Capital expenditure by the Commission:		
On power development .....	\$45,668.41	
On transmission lines .....	100,723.10	
On transformer stations .....	100,209.99	
On rural power districts .....	136,265.72	
On local distributing systems .....	4,943.74	
	\$387,810.96	
On Walkerton and Saugeen properties:		
Receipts in excess of expenditures .....	125,032.46	
Total .....		\$262,778.50

### EASTERN ONTARIO SYSTEM

Year ending October 31, 1931

Appropriations by Legislature and by Treasury Board Minute:		
Central Ontario section .....	\$906,500.00	
St. Lawrence, Ottawa and Rideau, Eastern and Madawaska sections .....	785,000.00	
Nipissing district .....	157,000.00	
	\$1,848,500.00	
Cash advances to the Commission out of such appropriations and treasury board minute .....	\$766,100.00	
Unexpended balance as at October 31, 1931, returnable to the Province ..	63,725.67	\$702,374.33
Capital expenditures by the Commission:		
On power development—Eastern Ontario system ..	\$60,982.37	
On transmission lines—Eastern Ontario system ..	65,065.36	
On transformer stations—Eastern Ontario system ..	142,675.76	
On rural power districts—Eastern Ontario system ..	325,118.12	
On local distributing systems—Eastern Ontario system ..	12,897.45	
	\$606,739.06	
On power development—Nipissing district .....	\$20,211.97	
On transmission lines—Nipissing district .....	74,656.80	
On transformer stations—Nipissing district .....	223.99	
On local distribution systems—Nipissing district ..	8,605.45	
	103,698.21	
	\$710,437.27	
On Ottawa River surveys:		
Receipts in excess of expenditures .....	8,062.94	\$702,374.33

**THUNDER BAY SYSTEM**

Appropriations by Legislature and by Treasury Board minute.....	\$863,325.00	
Cash advances to the Commission out of such appropriations and Treasury Board minute.....	\$783,802.00	
Unexpended balance as at October 31, 1931, returnable to Province..	23,234.92	\$760,567.08
Capital expenditure by the Commission:		
On power developments.....	\$750,806.21	
On transmission lines.....	2,869.45	
On transformer stations.....	6,159.06	
On rural power districts.....	732.36	
Total.....		\$760,567.08

**SUDBURY DISTRICT**

Appropriations by Legislature and special warrant.....	\$5,816,005.00	
Cash advances to the Commission out of such appropriations and special warrant.....	\$2,509,076.00	
Deduct—Capital expenditures in the year ending October 31, 1930 in excess of cash advances by the Province.....	32,088.23	
Unexpended balance as at October 31, 1931 returnable to Province..	\$2,476,987.77	
	51,296.19	\$2,425,691.58
Capital expenditure by the Commission:		
On retirement of Wahnapietaw Power Company Limited 6½ per cent. mortgage bonds assumed by this Commission at time of transfer of that Company's plants and works.....	\$481,005.00	
On transmission lines.....	1,948,394.68	
On transformer stations.....	1,418.78	
On local distribution system.....	1,124.31	
On power development:		
Receipts in excess of expenditures.....	6,251.19	
		\$2,425,691.58

**PATRICIA DISTRICT (EAR FALLS)**

Appropriations by Legislature.....	\$10,000.00	
Cash advances to the Commission out of such appropriations.....	Nil.	
Unexpended portion of cash advances in the fiscal year ending October 31, 1930 brought forward and returnable to Province..	\$778.47	
Receipts in excess of expenditures in respect of Ear Falls development for the fiscal year ending October 31, 1931, also returnable to Province.....	1,487.00	
Total—Returnable to Province.....		\$2,265.47

**MISCELLANEOUS**

Appropriations by Legislature.....	\$1,500,000.00	
Cash advances to the Commission out of such appropriations.....	6,000.00	
Unexpended balance as at October 31, 1931, returnable to Province..	1,492.58	\$4,507.42
Capital expenditure by the Commission:		
On service building and equipment.....		\$4,507.42

## RURAL POWER DISTRICTS—SUMMARY

Statement showing the total Capital Expenditures to October 31, 1931 on the construction of Primary and Secondary Lines in Rural Power Districts, the portion thereof in course of construction; the investment in lines in operation; the amounts of the Grants (fifty per cent of both Primary and Secondary lines) payable to the Commission by the Province of Ontario; also the extents to which Grants stand authorized by Orders-in-Council under the Rural Hydro-Electric Distribution Act, and the amounts of such Grants paid over by the Province to the Commission under such authorizations up to October 31, 1931

System	Total capital expenditure	In course of construction	In operation	Grant (50% of primary and secondary lines) payable by the Province	Extents to which grants stand authorized by orders-in-council	Grant paid by Province to Commission under such authorizations
Niagara system.....	\$ 11,515,501.47	\$ 137,028.86	\$ 11,378,472.61	\$ 5,720,598.19	\$ 6,721,031.08	\$ 5,689,585.65
Georgian Bay system.....	1,192,734.10	35,000.84	1,157,733.26	568,586.98	664,846.02	568,519.71
Thunder Bay system.....	1,464.71	1,464.71	.....	732.35	8,719.50	732.35
Eastern Ontario system (including Nipissing, Ottawa and Madawaska districts)	2,797,882.26	41,760.08	2,756,122.18	1,387,924.39	1,617,763.39	1,387,924.39
Totals.....	15,507,582.54	215,254.49	15,292,328.05	7,677,841.91	9,012,359.99	7,646,762.10
Additional sum authorized by above Orders-in-Council and paid over to the Commission, but not allocated as between rural power districts.....	.....	.....	.....	.....	.....	144,346.00
						\$7,791,108.10

NOTE:—

The cash paid over by the Province to the Commission up to October 31, 1931, on account of authorized grants to rural power districts—as above set out—amounts to..... \$7,791,108.10

The grants payable by the Province—as above set out—in respect of rural power districts as at October 31, 1931 amount in the aggregate to..... 7,677,841.91

A balance of.....

Which balance represents:

\$113,266.19

(a) Grant funds in the hands of the Commission at October 31, 1931, not allocated but to apply against the construction of authorized rural power districts and extension to existing districts..... \$144,346.00

Less:

(b) Grants (or balances thereof) payable by the Province to the Commission in respect of certain rural power districts completed, or under construction..... 31,079.81

\$113,266.19





## SECTION X

### MUNICIPAL ACCOUNTS

#### And Statistical Data Relating to Hydro-Electric Distribution Systems Operated by Individual Municipalities Served by The Hydro-Electric Power Commission

The Municipal Accounts section of this report presents in summary, and individually, the results of the operation of the local electrical utilities in municipalities owning their own distributing system and operating with energy supplied by or through the Hydro-Electric Power Commission.

Financial statements prepared from the books of these "Hydro" utilities are submitted herein to show how each has operated during the past year, and the financial status at the present time. Other tables give much useful statistical information respecting average costs for the various classes of service and the rates in force.

The books of account of the local electrical utilities in all municipalities which have contracted with the Hydro-Electric Power Commission of Ontario for a supply of power are kept in accordance with a uniform accounting system designed by the Commission. During the year 1931, the uniform accounting system was installed in the following municipalities as each became ready for the service: Deseronto, Hastings, Port Elgin, Rosseau, Southampton, Tweed, Walkerton, Wiarton and Long Branch (seceding from Etobicoke Township).

Periodical inspections are made of the books of all "Hydro" electrical utilities and local officials are assisted in the improvement of their office routine with a view to standardizing, as far as possible, the methods employed. In the majority of the smaller municipalities, much of the bookkeeping for the electrical utilities is performed by representatives of the Municipal Audit department of the Commission, in order to insure the employment of proper classifications of revenues and expenditures, to save time in preparation of reports, to insure compliance with all the requirements of the standard accounting system, and to make certain that the accounts represent as truly as possible the actual operating results for the year.

The first financial statement in this section presents consolidated balance sheets for each year since 1912, and thus shows the march of progress. It com-

bines the balance sheets of the local municipal utilities of all the systems. It is worth noting that the total plant value has increased from \$10,081,469.16 in 1913 to \$86,551,982.32 in 1931, and the total assets from \$11,907,826.86 to \$125,537,858.08. The liabilities have not increased in the same proportion as the assets, rising from \$10,468,351.79 to \$52,199,267.83. The reason for this is that much of the cost of the increasing plant value has been financed out of surplus and reserve accounts without increasing the liabilities of the various systems. By this procedure the funds of the systems are used to best advantage. Examination of the results will also show that there is a steady decline in the percentage of net liabilities to total assets; being from 88.0 per cent in 1913 to 44.1 per cent in 1931. The equities in the Hydro-Electric Power Commission's systems automatically acquired through the inclusion of sinking funds as part of the cost of power are not taken into account in arriving at these percentages.

The second financial statement presents consolidated operating reports for each year since "Hydro" service was inaugurated and combines the results from the local municipal utilities of all the systems. Study of this statement will show that the revenue has been increasing satisfactorily. The combined annual surplus, after providing for every cost of operation and fixed charges, including an adequate depreciation charge, amounted in 1931 to \$1,187,523.67.

The five statements, "A" to "E," following the two consolidated reports show the financial status of each municipal system and the results of operations, and also give information respecting revenue, number of consumers and consumption; cost of power to municipalities; power and lighting rates charged to consumers, etc. In the statements "A" and "B," the municipalities are arranged alphabetically under each system; in statement "D" the municipalities are arranged in three groups—cities, towns and small municipalities; in statements "C" and "E" all municipalities are arranged alphabetically.

**Statement "A"** shows balance sheets for each municipality with the plant values subdivided into the general natural subdivisions specified in the standard accounting system, and there are also shown the other items which make up the total assets. It is to be noted that among the assets there are items entitled "equity in H-E.P.C. systems." These items represent the amount of accumulated sinking fund paid by the various municipalities through the medium of "power cost" toward the ultimate retirement of the capital invested by the Hydro-Electric Power Commission on behalf of the partner municipalities. The total accumulation to the end of 1931 is shown on the consolidated balance sheet to be \$20,103,275.76.

During the year rebates were made in many municipalities in respect to surpluses standing to the credit of municipal street lighting and waterworks services, and to individual consumers, of amounts varying from one-sixth to one-fourth of the previous year's revenue. These rebates amounted in round figures to approximately \$332,600.00 and affected the cash balances and surpluses in the current balance sheets accordingly.

In each case the balance sheet is complete and final, including either in "accounts receivable," or "accounts payable," the adjustments with the Hydro-Electric Power Commission of the differences between the estimated and the actual costs of power to the municipality.



The liabilities of each local system are set out under their general subdivisions,—debenture balance, accounts payable, bank overdraft, and other liabilities; this last account including local debentures issued by municipalities to finance ornamental street-lighting systems as local improvements.

The reserves for depreciation, and the acquired equity in the Hydro-Electric Power Commission's systems, are also listed separately and totalled; and under the heading "surplus" are included not only the free operating profit but the accumulation of sinking fund applicable to debenture debt and also the amount of debentures already retired out of revenue.

The "depreciation reserve" now amounts to 18.71 per cent of the total depreciable plant, while the "depreciation reserve" and "surplus" combined have already reached the sum of \$51,542,184.66, approximating 59.55 per cent of the total plant cost.

**Statement "B"** shows detailed operating reports for each municipal electrical utility. It gives annual revenues from the various classes of consumers; the items of expenditure which make up the total annual expenditure; the amount of the annual surpluses and the sums set aside for depreciation. The population served by each local utility, and the number of consumers of each class, are also shown.

The item "power purchased" includes the annual adjustment made by the Commission, and hence shows for the calendar year the actual cost to the municipal electrical utility and not the cost at the interim billed rates.

Of the 275 municipal electrical utilities included in this statement, 200 had revenue from consumers sufficient to meet all operating expenses and fixed charges and to yield an aggregate operating surplus of \$1,299,066.94 for the year; 42 were able to defray all operating and fixed charges except depreciation, but failed to set aside the full theoretical amounts for that reserve by \$28,631.83; 33 had gross deficits in respect of operating expenses and fixed charges other than depreciation, aggregating \$39,571.44. The net surplus for all "Hydro" utilities was \$1,187,523.67 for the year.

**Statement "C"** shows the installation of street lights in each municipality together with the rates set by this Commission, the revenue for 1931, and the cost per capita in each municipality.

**Statement "D"** presents statistics relating to the supply of electrical energy to consumers in Ontario municipalities served by the Commission. It shows the revenue, kilowatt-hour consumption, number of consumers, average monthly consumption, average monthly bill and the net average cost per kilowatt-hour both for domestic and for commercial light service in each municipality. For power service this statement shows the revenue, the number of consumers and the average horsepower supplied by the municipal utility.\* For further reference to this informative statement, consult the special introduction to it on page 382.

**Statement "E"** presents the cost per horsepower of the power provided for and delivered to the municipalities by the Commission, and the local rates to consumers in force in the respective municipalities, during the year 1931, for domestic service, for commercial light service and for power service.

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\*The statistics include retail power only. Wholesale industrial power as supplied by the Commission direct, is reported in Section IX.

## CONSOLIDATED

YEAR . . . . .	1913	1914	1915
Number of municipalities included. . . . .	45	69	99
<b>ASSETS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Lands and buildings. . . . .	626,707.34	791,732.20	873,838.18
Substation equipment. . . . .	1,090,875.69	1,476,087.84	1,582,062.56
Distribution system—overhead. . . . .	2,690,834.74	3,422,763.93	4,234,626.05
Distribution system—underground. . . . .	644,514.24	807,153.53	928,420.77
Line transformers. . . . .	615,546.20	787,613.52	981,754.70
Meters. . . . .	840,606.64	1,172,475.11	1,418,165.08
Street lighting equipment—regular. . . . .	900,614.80	1,071,255.37	1,309,628.49
Street lighting equipment—ornamental. . . . .	62,765.34	270,386.55	197,644.82
Miscellaneous construction expenses. . . . .	866,551.89	2,062,035.90	1,701,182.66
Steam or hydraulic plant. . . . .	1,401,175.28	420,108.33	461,651.60
Old plant. . . . .	341,277.00	619,513.12	1,184,372.86
Total plant. . . . .	10,081,469.16	12,901,125.40	14,873,347.77
Bank and cash balance. . . . .	450,887.97	422,350.12	284,653.96
Securities and investments. . . . .			
Accounts receivable. . . . .	344,487.95	561,873.08	602,920.69
Inventories. . . . .	540,274.58	615,226.76	726,556.76
Sinking fund on local debentures. . . . .	431,747.27	625,217.03	868,983.78
Equity in H-E.P.C. systems. . . . .			
Other assets. . . . .	58,959.93	123,410.97	326,801.11
Total assets. . . . .	11,907,826.86	15,249,203.36	17,683,264.07
<b>LIABILITIES</b>			
Debenture balance. . . . .	8,711,308.37	10,678,078.36	11,831,811.03
Accounts payable. . . . .	1,553,711.45	1,682,150.29	2,040,038.01
Bank overdraft. . . . .	160,919.16	228,622.50	292,106.44
Other liabilities. . . . .	42,412.81	113,838.66	37,388.31
Total liabilities. . . . .	10,468,351.79	12,702,689.81	14,201,343.79
<b>RESERVES</b>			
For equity in H-E.P.C. systems. . . . .			
For depreciation. . . . .	478,145.88	850,618.07	1,337,739.73
Other reserves. . . . .			
Total reserves. . . . .	478,145.88	850,618.07	1,337,739.73
<b>SURPLUS</b>			
Debentures paid. . . . .	202,751.26	320,129.10	394,466.22
Local sinking fund. . . . .	431,747.27	625,217.03	868,983.78
Operating surplus. . . . .	326,830.66	750,549.35	880,730.55
Total surplus. . . . .	961,329.19	1,695,895.48	2,144,180.55
Total liabilities, reserves and surplus. . . . .	11,907,826.86	15,249,203.36	17,683,264.07
Percentage of net debt to total assets. . . . .	88.0	88.3	80.3

NOTE.—In computing the percentage of net debt to total assets the sinking fund on local debentures and equity in H-E.P.C. systems are excluded from assets, and total liabilities are reduced by amount of local sinking fund.

## BALANCE SHEET

1916	1917	1918	1919	1920
128	143	166	191	195
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,335,936.33	1,546,241.41	1,859,888.69	1,995,545.83	2,175,568.24
1,934,626.12	2,471,293.82	2,820,448.70	2,915,125.56	3,231,050.80
4,832,353.27	6,080,073.42	6,627,237.39	7,445,820.31	8,579,881.49
1,095,709.62	1,157,059.90	1,216,288.59	1,206,296.88	1,313,369.29
1,179,132.07	1,483,839.44	1,772,691.35	2,073,114.45	2,560,581.59
1,711,299.49	1,999,095.48	2,238,143.70	2,587,566.32	3,053,135.20
1,251,057.13	1,237,734.69	1,200,625.65	1,206,638.71	1,269,006.98
306,388.95	361,975.74	531,502.61	546,497.68	557,678.13
2,059,263.42	2,184,015.84	2,395,096.50	2,430,101.08	2,697,636.12
864,500.01	896,753.20	214,575.75	986,200.57	757,194.47
759,748.66	649,852.51	1,476,413.00	805,959.89	864,298.39
17,330,015.07	20,077,935.45	22,352,951.93	24,298,866.28	27,059,400.70
1,061,029.90	340,026.50	391,194.91	462,437.23	943,858.12
695,152.23	1,285,097.33	1,124,018.44	627,076.53	341,855.88
764,504.59	1,261,398.36	972,996.96	1,921,166.69	2,022,538.88
1,166,017.73	1,337,578.96	1,663,298.05	1,032,569.75	1,400,671.89
342,215.87	125,240.05	444,787.63	1,925,455.77	2,244,004.34
21,358,935.39	24,427,276.65	26,949,247.92	369,071.89	577,584.06
			86,216.05	25,447.07
			30,722,860.19	34,615,360.94
15,058,641.57	15,593,773.61	17,209,217.70	18,133,462.44	19,268,072.04
969,187.75	1,537,669.11	1,007,727.79	1,420,926.66	1,840,137.54
178,413.26	886,177.94	576,816.49	403,235.57	514,671.99
491,874.90	429,104.20	350,013.21	670,271.90	642,293.65
16,698,117.48	18,446,724.86	19,143,775.19	20,627,896.57	22,265,175.22
			373,871.89	577,584.06
1,843,804.68	2,463,723.83	3,133,550.17	3,750,162.28	4,788,645.03
1,843,804.68	2,463,723.83	3,133,550.17	4,124,034.17	5,366,229.09
549,778.59	694,797.90	920,076.56	1,328,657.68	1,440,157.52
1,165,785.94	1,340,615.38	1,662,602.69	1,754,020.37	2,246,474.47
1,101,448.70	1,481,414.68	2,089,243.31	2,888,251.40	3,297,325.64
2,817,013.23	3,516,827.96	4,671,922.56	5,970,929.45	6,983,956.63
21,358,935.39	24,427,276.65	26,949,247.92	30,722,860.19	34,615,360.94
78.4	75.5	71.0	67.9	65.4



## CONSOLIDATED

YEAR.....	1921	1922	1923
Number of municipalities included.....	215	226	235
<b>ASSETS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Lands and buildings.....	3,230,985.63	3,334,552.68	4,488,054.93
Substation equipment.....	5,403,689.90	5,046,857.98	6,015,919.75
Distribution system—overhead.....	8,397,361.48	11,165,330.24	13,135,581.76
Distribution system—underground.....	1,401,135.07	1,598,053.02	1,959,120.41
Line transformers.....	3,077,649.83	3,618,684.73	4,211,655.89
Meters.....	3,552,076.79	4,033,689.52	4,548,933.73
Street lighting equipment—regular.....	1,335,997.13	1,419,016.05	1,061,473.85
Street lighting equipment—ornamental.....	610,586.70	666,084.50	708,431.22
Miscellaneous construction expenses.....	3,030,134.16	3,261,495.74	3,681,274.88
Steam or hydraulic plant.....	704,848.46	565,158.54	566,619.86
Old plant.....	912,388.55	7,997,947.87	8,051,496.28
Total plant.....	31,565,854.60	42,706,840.87	48,428,562.56
Bank and cash balance.....	900,842.34	1,164,336.24	1,276,140.06
Securities and investments.....	556,608.53	443,938.18	1,153,424.47
Accounts receivable.....	2,148,287.05	3,874,317.14	3,198,769.34
Inventories.....	1,504,596.28	1,738,795.96	1,819,711.62
Sinking fund on local debentures.....	2,541,618.35	3,416,231.45	3,896,261.28
Equity in H-E.P.C. systems.....	795,570.51	1,543,434.12	2,929,603.94
Other assets.....	78,929.84	238,940.13	190,071.63
Total assets.....	40,111,979.23	55,126,834.09	62,892,544.90
<b>LIABILITIES</b>			
Debenture balance.....	21,619,220.99	30,454,186.12	33,056,501.29
Accounts payable.....	1,887,567.93	3,669,292.52	3,708,781.76
Bank overdraft.....	989,099.98	456,706.69	680,814.59
Other liabilities.....	938,368.84	586,203.02	1,517,828.47
Total liabilities.....	25,434,257.74	35,196,388.35	38,963,826.11
<b>RESERVES</b>			
For equity in H-E.P.C. systems.....	800,249.05	1,543,434.12	2,929,603.94
For depreciation.....	5,491,858.93	6,512,813.92	7,328,858.69
Other reserves.....	•	•	•
Total reserves.....	6,292,107.98	8,056,248.04	10,258,462.63
<b>SURPLUS</b>			
Debentures paid.....	1,860,079.53	3,104,591.15	2,852,038.38
Local sinking fund.....	2,541,618.35	3,416,231.45	3,896,261.28
Operating surplus.....	3,983,815.63	5,353,375.10	6,921,956.50
Total surplus.....	8,385,613.51	11,874,197.70	13,670,256.16
Total liabilities, reserves and surplus.....	40,111,979.23	55,126,834.09	62,892,544.90
Percentage of net debt to total assets.....	64.7	63.3	62.6

## BALANCE SHEET

1924	1925	1926	1927	1928
248	247	251	252	256
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
4,561,648.92	5,768,855.99	6,111,162.54	6,486,426.89	7,024,646.76
6,800,238.00	8,543,166.55	9,505,501.77	15,088,905.14	16,866,186.21
14,182,190.33	16,837,535.57	18,654,240.54	16,689,462.41	17,683,050.68
2,873,446.13	3,388,837.09	3,689,569.95	3,278,382.58	3,559,283.16
4,456,669.02	5,079,754.23	5,538,605.24	5,985,521.37	6,549,674.64
5,149,629.71	5,533,483.92	5,963,162.51	6,346,660.59	6,839,892.90
1,134,491.77	1,256,916.53	1,309,608.30	1,399,314.06	1,486,646.24
728,298.08	893,186.48	1,103,660.23	1,184,035.82	1,203,705.65
4,168,262.21	4,485,110.96	3,456,777.71	3,360,671.09	3,394,626.92
4,196,803.45	568,912.49	628,909.57	607,320.00	619,880.93
5,587,420.31	4,549,142.46	4,655,422.59	5,095,555.90	5,032,089.26
53,839,097.93	56,904,902.27	60,616,620.95	65,522,255.85	70,264,599.35
1,748,912.34	1,700,145.30	2,136,290.79	3,014,832.48	1,342,367.07
1,329,622.58	1,095,662.92	1,400,316.43	1,696,237.66	1,837,140.51
3,898,751.89	3,417,558.86	3,508,817.87	3,715,770.72	4,097,446.13
1,745,628.16	1,711,504.13	1,397,667.83	1,412,729.41	1,220,186.10
4,520,723.06	5,202,451.70	5,599,675.01	6,398,909.77	7,071,273.69
5,420,567.58	7,551,588.70	8,046,868.53	10,143,205.66	12,326,097.56
250,292.77	137,280.05	33,151.81	31,942.45	153,275.04
72,753,596.31	77,721,093.93	82,739,409.22	91,935,884.00	98,312,385.45
38,005,162.50	37,919,225.01	39,602,533.48	42,891,361.57	42,597,175.78
3,117,224.08	3,139,067.92	3,118,684.78	2,988,621.90	3,074,634.25
162,100.71	226,147.82	163,725.53	252,362.52	253,143.81
1,780,564.27	1,075,914.83	1,087,795.08	1,154,810.24	1,258,610.23
43,065,051.56	42,360,355.58	43,972,738.87	47,287,156.23	47,183,564.07
5,420,567.58	7,551,588.70	8,046,868.53	10,143,205.66	12,326,097.56
8,097,834.68	8,699,437.68	9,360,322.27	10,319,889.05	11,140,795.68
.....	1,157,147.20	947,970.23	1,002,916.69	1,117,257.63
13,518,402.26	17,408,173.58	18,355,161.03	21,466,011.40	24,584,150.87
3,530,610.35	4,440,138.34	5,493,879.83	6,648,767.38	7,928,907.61
4,520,723.06	5,202,451.71	5,599,675.01	6,398,909.77	7,071,273.69
8,118,809.08	8,309,074.73	9,317,954.48	10,135,039.22	11,544,489.21
16,170,142.49	17,952,564.77	20,411,509.32	23,182,716.37	26,544,670.51
72,753,596.31	77,721,093.93	82,739,409.22	91,935,884.00	98,312,385.45
61.4	57.2	55.5	54.2	50.8

## CONSOLIDATED BALANCE SHEET—Concluded

YEAR.....	1929	1930	1931
Number of municipalities included.....	260	267	275
<b>ASSETS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Lands and buildings.....	7,469,451.46	7,936,974.31	8,407,664.48
Substation equipment.....	18,102,792.13	19,485,056.28	21,013,956.74
Distribution system—overhead.....	18,108,016.82	19,220,326.48	19,918,355.76
Distribution system—underground.....	4,823,369.60	4,932,189.05	5,361,627.24
Line transformers.....	7,312,742.17	7,953,090.23	8,649,875.07
Meters.....	7,405,478.91	7,840,948.07	8,106,202.88
Street lighting equipment—regular.....	1,594,183.25	1,780,785.67	2,205,613.18
Street lighting equipment—ornamental.....	1,458,349.64	1,520,891.01	1,456,742.91
Miscellaneous construction expenses.....	3,483,487.78	3,996,747.77	3,827,132.05
Steam or hydraulic plant.....	489,097.57	139,587.28	458,374.05
Old plant.....	5,093,378.75	5,322,690.14	7,146,437.96
Total plant.....	75,340,348.08	80,129,286.29	86,551,982.32
Bank and cash balance.....	858,733.68	2,722,250.12	2,738,319.67
Securities and investments.....	2,001,088.81	1,909,439.11	1,999,846.42
Accounts receivable.....	4,683,201.97	4,481,006.92	3,957,972.78
Inventories.....	1,365,033.58	1,242,994.51	1,276,531.01
Sinking fund on local debentures.....	7,753,613.88	8,396,255.47	8,735,050.84
Equity in H-E.P.C. systems.....	14,754,865.40	17,346,372.44	20,103,275.76
Other assets.....	152,260.86	173,030.05	174,879.28
Total assets.....	106,909,146.26	116,400,634.91	125,537,858.08
<b>LIABILITIES</b>			
Debenture balance.....	42,930,127.74	45,091,808.06	44,594,400.03
Accounts payable.....	3,132,145.03	3,001,186.21	5,382,306.13
Bank overdraft.....	412,056.69	405,663.14	312,575.54
Other liabilities.....	1,621,378.17	1,642,771.59	1,909,986.13
Total liabilities.....	48,095,707.63	50,141,429.00	52,199,267.83
<b>RESERVES</b>			
For equity in H-E.P.C. systems.....	14,754,865.40	17,346,372.44	20,103,275.76
For depreciation.....	11,911,154.49	12,885,387.51	13,748,049.68
Other reserves.....	1,437,371.26	1,574,655.74	1,693,129.83
Total reserves.....	28,103,391.15	31,806,415.69	35,544,455.27
<b>SURPLUS</b>			
Debentures paid.....	9,194,253.59	10,728,279.15	13,150,040.37
Local sinking fund.....	7,962,121.20	8,396,255.47	8,735,050.84
Operating surplus.....	13,553,672.69	15,328,255.60	15,909,043.77
Total surplus.....	30,710,047.48	34,452,790.22	37,794,134.98
Total liabilities, reserves and surplus.....	106,909,146.26	116,400,634.91	125,537,858.08
Percentage of net debt to total assets.....	47.8	46.0	44.1

NOTE.—In computing the percentage of net debt to total assets the sinking fund on local debentures and equity in H-E.P.C. systems are excluded from assets, and total liabilities are reduced by amount of local sinking fund.



## CONSOLIDATED OPERATING REPORT

YEAR.....	1912	1913	1914	1915
Number of municipalities included . . .	28	45	69	99
<b>EARNINGS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Domestic service .....		572,154.38	789,130.81	944,271.08
Commercial light service .....		525,438.16	673,803.92	720,209.26
Commercial power service .....		905,378.17	1,214,829.31	1,501,797.78
Municipal power .....				
Street lighting .....		560,925.56	698,409.71	835,970.87
Rural service .....				
Miscellaneous .....		53,543.24	57,482.41	68,046.29
Total earnings .....	1,617,674.00	2,617,439.51	3,433,656.16	4,070,295.28
<b>EXPENSES</b>				
Power purchased .....		789,632.87	1,045,752.65	1,485,614.72
Substation operation .....		78,394.81	97,658.90	107,607.31
Substation maintenance .....		18,698.46	31,790.99	25,935.56
Distribution system, operation and maintenance .....		104,114.51	130,998.65	154,409.71
Line transformer maintenance .....		8,547.61	11,764.32	11,508.92
Meter maintenance .....		5,222.19	9,536.07	12,899.14
Consumers' premises expenses .....		53,108.38	65,192.23	47,494.26
Street lighting, operation and maintenance .....		84,903.76	113,047.80	136,983.38
Promotion of business .....		72,303.51	86,683.02	74,402.55
Billing and collecting .....		77,351.76	103,560.71	131,541.27
General office, salaries and expenses .....		154,932.69	230,899.75	236,777.86
Undistributed expense .....		65,423.64	89,350.91	129,209.15
Interest .....		528,549.21	662,092.34	817,978.89
Sinking fund and principal payments on debentures .....		*	*	*
Total expenses .....	1,377,168.00	2,041,183.40	2,678,328.34	3,371,414.00
Surplus .....	240,506.00	576,256.11	755,327.82	698,881.28
Depreciation charge .....	124,992.47	262,675.24	357,883.31	414,506.99
Surplus less depreciation .....	115,513.53	313,580.87	397,444.51	284,374.29

\*Debenture payments included in "Interest."

## CONSOLIDATED

YEAR . . . . .	1916	1917	1918
Number of municipalities included . . . .	128	143	166
<b>EARNINGS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Domestic service . . . . .	1,172,878.96	1,417,460.31	1,632,272.12
Commercial light service . . . . .	812,130.78	899,023.72	968,399.42
Commercial power service . . . . .	1,921,152.31	2,665,280.65	3,417,248.37
Municipal power . . . . .			
Street lighting . . . . .	930,057.48	967,495.10	902,875.55
Rural service . . . . .			
Miscellaneous . . . . .	147,381.50	120,805.39	161,243.70
Total earnings . . . . .	4,983,601.03	6,070,065.17	7,082,039.16
<b>EXPENSES</b>			
Power purchased . . . . .	1,959,446.83	2,563,880.17	2,807,769.33
Substation operation . . . . .	153,761.08	203,091.20	238,257.34
Substation maintenance . . . . .	46,131.53	42,129.04	60,805.92
Distribution system, operation and maintenance . . . . .	154,247.17	169,326.24	223,347.81
Line transformer maintenance . . . . .	14,528.17	25,328.95	30,488.83
Meter maintenance . . . . .	24,218.48	44,461.55	63,155.56
Consumers' premises expenses . . . . .	52,602.01	61,765.14	65,149.59
Street lighting, operation and maintenance . . . . .	145,471.50	157,857.73	196,157.18
Promotion of business . . . . .	79,324.85	73,516.37	64,962.78
Billing and collecting . . . . .	154,508.58	188,083.84	208,660.76
General office, salaries and expenses . . . . .	306,709.35	349,932.05	421,680.15
Undistributed expense . . . . .	97,333.97	102,938.80	117,474.07
Interest . . . . .	951,781.99	1,085,180.80	1,238,425.53
Sinking fund and principal payments on debentures . . . . .	*	*	*
Total expenses . . . . .	4,140,065.51	5,077,491.08	5,736,334.85
Surplus . . . . .	843,535.52	992,574.09	1,345,704.31
Depreciation charge . . . . .	486,141.80	607,296.29	718,162.30
Surplus less depreciation . . . . .	357,393.72	385,367.80	627,542.01

\*Debenture payments included in "Interest."

## OPERATING REPORT—Continued

1919	1920	1921	1922	1923
181	186	205	214	224
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,991,632.31	2,546,345.30	3,149,080.03	3,786,608.23	5,166,452.24
1,175,143.56	1,512,854.63	1,851,501.76	2,158,306.34	3,260,772.50
3,443,107.13	3,752,188.22	3,895,437.46	4,383,912.97	5,927,666.37
.....	532,279.09	654,531.01	973,263.38	1,161,598.60
988,900.95	1,005,535.11	1,060,357.77	1,160,446.81	1,269,604.48
.....	168,919.95	145,566.57	105,877.09	116,639.06
228,270.65	189,778.63	225,467.70	187,689.39	316,311.21
7,827,054.60	9,707,900.93	10,981,942.30	12,756,104.21	17,219,044.46
3,284,490.68	4,216,667.87	4,876,650.31	6,636,853.37	8,699,026.67
217,638.89	285,407.35	314,838.35	315,443.70	474,442.13
81,853.63	102,050.81	104,798.01	100,763.67	133,815.53
286,310.76	344,551.57	487,918.33	519,252.16	636,477.41
42,509.12	46,323.09	65,088.46	52,932.26	75,920.10
78,726.64	123,701.18	116,722.97	107,806.88	139,104.81
84,301.24	116,283.52	134,854.92	143,388.88	218,682.02
215,963.86	236,930.79	297,481.52	297,363.86	299,579.08
77,789.22	78,294.85	101,804.46	129,932.63	184,371.00
236,504.75	295,942.88	321,685.71	338,153.50	444,306.92
452,131.22	559,695.29	656,268.11	605,852.50	937,463.47
190,690.09	256,400.33	308,874.42	385,895.03	359,206.91
1,285,571.51	1,431,807.16	998,611.47	1,074,657.44	1,615,205.16
*	*	532,183.96	635,469.90	990,907.14
6,531,481.61	8,094,056.69	9,317,781.00	11,343,765.78	15,208,508.35
1,295,572.99	1,613,844.24	1,664,161.30	1,412,338.43	2,010,536.11
814,219.37	902,028.75	1,044,434.85	715,814.24	916,782.75
481,353.62	711,815.49	619,726.45	696,524.19	1,093,753.36



## CONSOLIDATED

YEAR . . . . .	1924	1925	1926
Number of municipalities included. . . . .	241	242	248
<b>EARNINGS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Domestic service. . . . .	5,993,231.07	6,439,159.86	7,372,602.62
Commercial light service. . . . .	3,566,227.22	3,866,292.79	4,187,899.19
Commercial power service. . . . .	6,222,865.88	6,568,854.77	6,789,217.54
Municipal power. . . . .	1,352,966.47	1,923,093.09	1,922,512.34
Street lighting. . . . .	1,356,668.97	1,415,382.22	1,457,686.21
Rural service. . . . .	75,100.24	37,975.18	37,810.73
Miscellaneous. . . . .	231,663.58	286,451.08	471,134.15
Total earnings. . . . .	18,798,723.43	20,537,208.99	22,238,862.78
<b>EXPENSES</b>			
Power purchased. . . . .	9,669,789.40	11,063,123.34	12,185,669.10
Substation operation. . . . .	430,056.09	417,921.71	450,416.84
Substation maintenance. . . . .	202,050.04	207,497.63	286,520.37
Distribution system, operation and maintenance. . . . .	648,700.62	686,344.54	795,514.70
Line transformer maintenance. . . . .	82,936.50	75,473.28	74,876.11
Meter maintenance. . . . .	141,231.23	156,909.55	189,603.70
Consumers' premises expenses. . . . .	237,316.20	252,808.47	275,020.62
Street lighting, operation and maintenance. . . . .	269,973.30	275,316.60	295,869.37
Promotion of business. . . . .	202,060.74	217,102.24	234,696.74
Billing and collecting. . . . .	490,273.30	521,134.01	557,271.54
General office, salaries and expenses. . . . .	889,907.66	891,640.29	786,742.60
Undistributed expense. . . . .	494,078.50	520,584.58	460,288.30
Truck operation and maintenance. . . . .			
Interest. . . . .	1,779,991.26	1,889,810.95	1,985,233.73
Sinking fund and principal payments on debentures. . . . .	1,122,798.87	1,294,027.29	1,347,511.92
Total expenses. . . . .	16,661,163.71	18,469,694.48	19,925,235.64
Surplus. . . . .	2,137,559.72	2,067,514.51	2,313,627.14
Depreciation charge. . . . .	973,649.62	1,068,880.42	1,146,273.05
Surplus less depreciation. . . . .	1,163,910.10	998,634.09	1,167,354.09

## OPERATING REPORT—Concluded

1927	1928	1929	1930	1931
251	255	259	267	275
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
8,189,866.89	8,925,050.56	9,873,681.57	10,542,903.89	11,478,964.41
4,626,815.51	5,182,723.32	5,697,766.06	5,961,383.23	6,278,074.62
7,342,173.20	8,298,669.44	9,376,158.74	9,340,653.28	9,568,403.74
1,913,502.88	1,921,300.97	2,086,444.24	2,111,482.38	1,967,118.54
1,489,242.37	1,534,476.98	1,598,262.43	1,674,528.03	1,807,973.41
13,765.72	48,451.90*	51,590.54*	28,954.60*	29,446.38*
581,913.04	465,791.92	522,780.95	581,914.78	527,583.78
24,157,279.61	26,376,465.09	29,206,684.53	30,241,820.19	31,657,564.88
13,505,583.77	14,688,570.08	16,379,162.88	17,323,077.97	18,409,304.24
430,211.76	420,512.48	461,270.27	479,502.48	514,356.35
275,148.86	247,647.88	274,275.56	320,716.48	303,536.11
758,747.10	736,159.85	907,817.04	991,972.86	1,031,507.56
94,706.38	88,676.18	93,608.14	96,746.35	97,638.56
214,813.87	218,530.96	242,126.27	278,379.43	293,082.92
285,352.68	291,333.03	314,495.03	317,902.45	384,404.66
318,395.79	329,597.16	359,373.40	372,211.17	378,528.64
220,687.60	249,842.01	250,844.28	249,070.05	260,436.05
605,627.58	638,797.02	695,729.42	745,159.02	830,712.29
824,868.90	844,578.55	904,025.64	907,226.89	949,930.07
531,003.80	542,755.34	502,206.06	523,862.96	546,004.35
.....	.....	110,630.62	112,029.82	107,918.93
2,063,698.00	2,111,049.49	2,152,695.49	2,220,214.45	2,488,220.49
1,505,626.31	1,601,711.32	1,687,201.64	1,828,061.62	2,081,348.30
21,634,472.40	23,009,761.35	25,335,461.74	26,766,134.00	28,676,929.52
2,522,807.21	3,366,703.74	3,871,222.79	3,475,686.19	2,980,635.36
1,249,711.65	1,350,252.16	1,469,846.83	1,574,991.68	1,793,111.69
1,273,095.56	2,016,451.58	2,401,375.96	1,900,694.51	1,187,523.67

\*Profits from the sale of merchandise. Rural service now given in "Rural Power Districts." Consult Section IX.

# STATEMENT

## Balance Sheets of Electrical Departments of

### NIAGARA SYSTEM

Municipality.....	Acton	Agincourt	Ailsa Craig 516	Alvinston	Amherst- burg 3,083
Popluation.....	1,951	P.V.		657	
<b>ASSETS</b>	<b>\$ c</b>	<b>\$ c.</b>	<b>\$ c</b>	<b>\$ c.</b>	<b>\$ c.</b>
Land and buildings.....	1,545.45			133.56	
Substation equipment.....	1,847.39				932.00
Distribution system—overhead...	22,334.52	8,329.91	8,161.11	14,008.12	31,161.65
Distribution system—underground					
Line transformers.....	11,015.94	3,190.93	3,085.95	3,024.48	14,262.90
Meters.....	10,355.46	2,328.49	2,571.67	2,939.07	15,157.22
Street light equipment, regular...	1,792.54	755.30	404.09	1,090.62	812.44
Street light equipment, ornamental					5,598.72
Miscellaneous construction expense	2,670.29		503.36	771.18	1,736.17
Steam or hydraulic plant.....					
Old plant.....	3,481.50			773.85	
<b>Total plant.....</b>	<b>55,043.09</b>	<b>14,601.63</b>	<b>14,726.18</b>	<b>22,740.88</b>	<b>69,661.10</b>
Bank and cash balance.....	3,441.64	1,756.47	2,898.09	295.74	14,215.71
Securities and investments.....	1,500.00	1,000.00	3,000.00	2,000.00	
Accounts receivable.....	1,050.32	638.39	347.96	728.39	3,808.80
Inventories.....	872.13				
Sinking fund on local debentures...					
Equity in H-E.P.C. systems.....	26,638.12	3,690.99	7,817.08	7,586.70	20,992.59
Other assets.....		45.22			
<b>Total assets.....</b>	<b>88,545.30</b>	<b>21,735.70</b>	<b>28,789.31</b>	<b>33,351.71</b>	<b>108,678.20</b>
Deficit.....				1,794.84	
<b>Total.....</b>	<b>88,545.30</b>	<b>21,735.70</b>	<b>28,789.31</b>	<b>35,146.55</b>	<b>108,678.20</b>
<b>LIABILITIES</b>					
Debenture balance.....	1,247.30	4,532.01	455.99	14,492.48	27,717.99
Accounts payable.....				300.00	
Bank overdraft.....					
Other liabilities.....	333.53		55.00		7,252.14
<b>Total liabilities.....</b>	<b>1,580.83</b>	<b>4,532.01</b>	<b>510.99</b>	<b>14,792.48</b>	<b>34,970.13</b>
<b>RESERVES</b>					
For equity in H-E.P.C. systems...	26,638.12	3,690.99	7,817.08	7,586.70	20,992.59
For depreciation.....	8,597.57	1,271.15	5,013.27	3,730.61	12,635.08
Other reserves.....					
<b>Total reserves.....</b>	<b>35,235.69</b>	<b>4,962.14</b>	<b>12,830.35</b>	<b>11,317.31</b>	<b>33,627.67</b>
<b>SURPLUS</b>					
Debentures paid.....	13,252.70	3,540.64	3,778.98	9,036.76	4,335.61
Local sinking fund.....					
Operating surplus.....	38,476.08	8,700.91	11,668.99		35,744.79
<b>Total surplus.....</b>	<b>51,728.78</b>	<b>12,241.55</b>	<b>15,447.97</b>	<b>9,036.76</b>	<b>40,080.40</b>
<b>Total liabilities, reserves and surplus</b>	<b>88,545.30</b>	<b>21,735.70</b>	<b>28,789.31</b>	<b>35,146.55</b>	<b>108,678.20</b>
Percentage of net debt to total assets	2.6	25.1	2.4	57.4	35.8



“A”

## Hydro Municipalities as at December 31, 1931

Ancaster Twp. 3,119	Arkona 383	Aylmer 1,996	Ayr 776	Baden P.V.	Beachville P.V.	Belle River 715	Blenheim 1,630
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
		9,019.23	125.00	660.64	176.13		
14,881.01	9,181.29	20,177.68	12,259.90	6,889.90	13,010.85	14,815.14	909.64
9,641.88	1,513.44	10,356.91	3,850.56	4,048.22	2,356.94	3,651.15	7,751.68
3,964.93	1,643.52	9,236.06	3,492.08	2,807.40	2,988.30	3,303.57	9,757.18
1,171.89	671.60	1,519.27	628.42	447.45	410.35	924.29	3,120.65
294.93	242.32	1,162.01	941.79		652.04	962.78	1,482.97
	1,030.30	6,719.17	4,002.53				1,482.58
29,957.64	14,282.47	58,190.33	25,300.28	14,853.61	19,594.61	23,656.93	47,711.58
139.70	55.91	9,099.15		3,081.43	2,368.37	3,306.82	4,643.98
1,347.71	176.97	12,000.00	956.16	271.78	10,000.00	3,000.00	945.32
6,125.96	2,012.34	827.19	54.61	703.18	703.18	976.99	
		17,901.04	6,421.30	16,044.33	19,289.25	3,923.04	16,978.28
			517.29				
37,571.01	16,527.69	98,072.32	33,195.03	34,251.15	51,955.41	34,863.78	70,279.16
	1,516.48						
37,571.01	18,044.17	98,072.32	33,195.03	34,251.15	51,955.41	34,863.78	70,279.16
8,487.20	10,833.15	22,702.99	7,631.46	2,511.55	2,722.46	6,213.02	9,453.92
1,527.15	1,840.00	1,583.45					1,508.98
338.81			96.83				
139.70		55.00				15.00	1,722.97
10,492.86	12,673.15	24,341.44	7,728.29	2,511.55	2,722.46	6,228.02	12,685.87
6,125.96	2,012.34	17,901.04	6,421.30	16,044.33	19,289.25	3,923.04	16,978.28
4,687.26	1,079.00	9,586.27	3,140.83	1,687.87	5,104.04	3,473.93	9,510.15
						5,000.00	
10,813.22	3,091.34	27,487.31	9,562.13	17,732.20	24,393.29	12,396.97	26,488.43
2,302.38	2,279.68	15,998.93	9,871.92	2,488.45	2,630.54	2,286.98	4,546.08
13,962.55		30,244.64	6,032.69	11,518.95	22,209.12	13,951.81	26,558.78
16,264.93	2,279.68	46,243.57	15,904.61	14,007.40	24,839.66	16,238.79	31,104.86
37,571.01	18,044.17	98,072.32	33,195.03	34,251.15	51,955.41	34,863.78	70,279.16
33.4	87.3	30.4	28.9	13.8	8.3	20.1	21.6

**STATEMENT**

**Balance Sheets of Electrical Departments of**

**NIAGARA  
SYSTEM—Continued**

Municipality.....	Blyth	Bolton	Bothwell	Brampton	Brantford
Population.....	621	609	575	5,137	30,103
<b>ASSETS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Lands and buildings.....				5,081.32	82,837.77
Substation equipment.....				24,742.53	164,656.11
Distribution system—overhead...	10,850.60	9,926.41	5,950.67	47,031.62	241,530.26
Distribution system—underground					6,000.00
Line transformers.....	2,441.35	4,296.34	2,575.37	24,863.92	113,415.33
Meters.....	1,837.12	2,926.32	2,822.96	25,265.88	112,264.61
Street light equipment, regular...	1,284.19	817.19	4,634.70	2,574.56	23,187.42
Street light equipment, ornamental					38,807.62
Miscellaneous construction expense	293.65	1,043.38	528.56	18,668.33	33,127.67
Steam or hydraulic plant.....					
Old plant.....	2,332.68	1,554.60			
Total plant.....	19,039.59	20,564.24	16,512.26	148,228.16	815,826.79
Bank and cash balance.....	448.85	672.85	1,960.99	842.88	1,275.48
Securities and investments.....			11,000.00	6,301.56	
Accounts receivable.....	1,420.61	118.67	274.48	7,260.71	42,906.78
Inventories.....				218.06	884.66
Sinking fund on local debentures..					176,755.65
Equity in H-E.P.C. systems.....	3,676.77	8,878.96	9,478.92	73,804.62	373,173.29
Other assets.....					
Total assets.....	24,585.82	30,234.72	39,226.65	236,655.99	1,410,822.65
Deficit.....					
Total.....	24,585.82	30,234.72	39,226.65	236,655.99	1,410,822.65
<b>LIABILITIES</b>					
Debenture balance.....	10,929.18	7,059.55	3,376.34	18,759.06	409,500.00
Accounts payable.....	68.93	94.89	1,324.32	3,413.90	2,249.99
Bank overdraft.....					
Other liabilities.....	15.00				50,052.81
Total liabilities.....	11,013.11	7,154.44	4,700.66	22,172.96	461,802.80
<b>RESERVES</b>					
For equity in H-E.P.C. systems...	3,676.77	8,878.96	9,478.92	73,804.62	373,173.29
For depreciation.....	2,026.91	4,174.65	4,914.12	38,842.02	178,634.05
Other reserves.....			10.00		1,000.00
Total reserves.....	5,703.68	13,053.61	14,403.04	112,646.64	552,807.34
<b>SURPLUS</b>					
Debentures paid.....	5,339.85	5,440.45	2,157.85	50,291.58	120,500.00
Local sinking fund.....					176,755.65
Operating surplus.....	2,529.18	4,586.22	17,965.10	51,544.81	98,956.86
Total surplus.....	7,869.03	10,026.67	20,122.95	101,836.39	396,212.51
Total liabilities, reserves and surplus	24,585.82	30,234.72	39,226.65	236,655.99	1,410,822.65
Percentage of net debt to total assets	52.7	33.5	15.8	13.6	30.0

## “A”—Continued

## Hydro Municipalities as at December 31, 1931

Brantford Twp. 7,595	Bridgeport P.V.	Brigden P.V.	Brussels 725	Burford P.V.	Burgess- ville, P.V.	Caledonia 1,456	Campbell- ville, P.V.
\$ c.	\$ c.	\$ c. 101.03	\$ c.	\$ c. 202.00	\$ c.	\$ c.	\$ c.
1,192.71							
51,537.94	9,152.07	7,066.07	13,433.64	8,678.49	3,366.81	16,016.40	2,954.27
16,435.10	3,429.46	2,017.09	2,395.35	2,518.08	1,207.84	5,612.06	718.23
11,713.02	2,097.75	2,293.70	3,592.38	3,280.33	935.50	5,691.02	511.99
4,157.36	1,535.39	464.90	1,568.00	425.14	261.02	1,531.34	258.56
2,914.14	563.56	858.11	1,572.29	644.50	457.22	722.67	6.82
		1,381.00	2,827.50				
87,950.27	16,778.23	14,181.90	25,389.16	15,748.54	6,228.39	29,573.49	4,449.87
8,266.68	1,529.71	486.51	474.95	1,801.27	2,544.40	501.94	775.34
643.16				4,000.00		2,000.00	1,000.00
544.00	479.89	730.59	192.05	585.92	112.97	118.71	20.55
2,718.36							
11,212.02	1,540.59	5,662.74	5,319.78	6,134.36	2,531.45	9,702.73	601.38
111,334.49	20,328.42	21,061.74	31,375.94	28,270.09	11,417.21	41,896.87	6,847.14
111,334.49	20,328.42	21,061.74	31,375.94	28,270.09	11,417.21	41,896.87	6,847.14
29,670.86	11,914.39	1,429.18	15,144.96	1,092.60	1,056.29	2,247.74	4,093.28
2,643.51	811.52	554.04	10.38		50.84		
1,310.45	29.98			5.00			
33,624.82	12,755.89	1,983.22	15,155.34	1,097.60	1,107.13	2,247.74	4,093.28
11,212.02	1,540.59	5,662.74	5,319.78	6,134.36	2,531.45	9,702.73	601.38
19,135.84	3,953.84	2,572.79	2,923.51	3,860.41	1,842.83	3,864.69	458.54
30,347.86	5,494.43	8,235.53	8,243.29	9,994.77	4,374.28	13,567.42	1,059.92
27,454.80	453.64	6,570.82	5,855.04	7,907.40	2,443.71	2,376.26	1,354.49
2,718.36							
17,188.65	1,624.46	4,272.17	2,122.27	9,270.32	3,492.09	23,705.45	339.45
47,361.81	2,078.10	10,842.99	7,977.31	17,177.72	5,935.80	26,081.71	1,693.94
111,334.49	20,328.42	21,061.74	31,375.94	28,270.09	11,417.21	41,896.87	6,847.14
31.7	67.9	12.9	58.2	5.0	12.5	7.0	65.5



# STATEMENT

## Balance Sheets of Electrical Departments of

### NIAGARA SYSTEM—Continued

Municipality.....	Cayuga	Chatham	Chippawa	Clifford	Clinton
Population.....	661	16,441	1,222	496	1,911
ASSETS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....		46,055.45	631.50		7,985.47
Substation equipment.....		116,194.83			7,544.43
Distribution system—overhead... 16,094.68		165,634.06	18,793.02	6,894.15	21,875.76
Distribution system—underground		79,550.54			
Line transformers.....	2,862.59	86,816.71	5,402.56	1,005.30	7,516.75
Meters.....	2,443.64	67,924.39	4,702.80	2,079.15	9,155.50
Street light equipment, regular... 942.83		17,679.80	1,869.16	670.59	1,297.67
Street light equipment, ornamental		35,426.10			
Miscellaneous construction expense	372.67	33,083.55	1,022.19	37.44	3,909.45
Steam or hydraulic plant.....					
Old plant.....		42,752.31			10,658.09
Total plant.....	22,716.41	691,117.74	32,421.23	10,686.63	69,943.12
Bank and cash balance.....	638.80	1,705.03		1,146.90	3,613.57
Securities and investments.....				81.05	3,045.56
Accounts receivable.....	818.96	22,087.32	820.49		2,274.69
Inventories.....	133.28	5,136.02			26,461.26
Sinking fund on local debentures..					21,193.98
Equity in H-E.P.C. systems.....	3,389.41	180,699.00	7,852.98	2,505.97	
Other assets.....					
Total assets.....	27,696.86	900,745.11	41,094.70	14,420.55	126,532.18
Deficit.....					
Total.....	27,696.86	900,745.11	41,094.70	14,420.55	126,532.18
LIABILITIES					
Debenture balance.....	15,258.22	273,264.10	7,871.75	7,086.96	44,500.00
Accounts payable.....	763.02	21,721.31	731.78	350.07	
Bank overdraft.....			31.26		
Other liabilities.....		37,997.49			30.22
Total liabilities.....	16,021.24	332,982.90	8,634.79	7,437.03	44,530.22
RESERVES					
For equity in H-E.P.C. systems...	3,389.41	180,699.00	7,852.98	2,505.97	21,193.98
For depreciation.....	2,774.66	99,226.90	5,789.77	1,242.73	17,673.90
Other reserves.....	252.94	3,288.48			760.67
Total reserves.....	6,417.01	283,214.38	13,642.75	3,748.70	39,628.55
SURPLUS					
Debentures paid.....	4,741.78	96,735.90	5,478.25	913.04	
Local sinking fund.....					26,461.26
Operating surplus.....	516.83	187,811.93	13,338.91	2,321.78	15,912.15
Total surplus.....	5,258.61	284,547.83	18,817.16	3,234.82	42,373.41
Total liabilities, reserves and surplus	27,696.86	900,745.11	41,094.70	14,420.55	126,532.18
Percentage of net debt to total assets	65.9	44.1	26.0	62.4	22.9

## “A”—Continued

## Hydro Municipalities as at December 31, 1931

Comber P.V.	Cottam P.V.	Courtright 370	Dashwood P.V.	Delaware P.V.	Dorchester P.V.	Drayton 559	Dresden 1,403
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
7,188.27	9,055.23	6,515.06	3,303.94	3,782.04	8,038.06	9,262.73	523.00 17,495.37
3,422.04	1,538.31	1,225.40	1,600.44	896.83	3,286.91	2,841.13	7,333.20
2,352.27	1,803.64	880.37	1,340.00	927.94	2,364.81	3,221.69	5,836.85
384.93	359.43	425.08	342.52	148.08	496.74	673.50	1,116.00
968.54	206.27	558.67	291.87	203.81	328.41	388.37	529.30
							4,815.01
14,316.05	12,962.88	9,604.58	6,878.77	5,958.70	14,514.93	16,387.42	37,648.73
3,030.59	1,858.72		2,617.38	585.89	345.22	1,767.21	264.44
	288.54	341.11	94.49	2,500.00 251.07	2,000.00 928.48	6,000.00 5.01	2,000.00 1,236.97 279.84
9,281.87	1,260.31	2,346.94	4,011.92	1,246.88	3,152.32	5,294.43	14,302.63
26,628.51	16,370.45	12,292.63	13,602.56	10,542.54	20,940.95	29,454.07	55,732.61
26,628.51	16,370.45	12,292.63	13,602.56	10,542.54	20,940.95	29,454.07	55,732.61
2,554.79	7,559.61	4,661.77	2,348.50	2,444.03	2,769.12	6,974.74	2,075.97
493.68		34.90	3.42	21.16		2,487.99	1,191.85
	115.00						95.00
3,048.47	7,674.61	4,696.67	2,351.92	2,465.19	2,769.12	9,462.73	3,362.82
9,281.87	1,260.31	2,346.94	4,011.92	1,246.88	3,152.32	5,294.43	14,302.63
3,719.27	1,759.63	681.15	1,583.50	996.64	928.97	4,189.56	4,761.88
13,001.14	3,019.94	3,028.09	5,595.42	2,243.52	4,081.29	9,483.99	19,064.51
5,145.21	1,440.61	3,476.58	1,051.50	1,555.97	1,530.88	2,525.26	14,162.28
5,433.69	4,235.29	1,091.29	4,603.72	4,277.86	12,559.66	7,982.09	19,143.00
10,578.90	5,675.90	4,567.87	5,655.22	5,833.83	14,090.54	10,507.35	33,305.28
26,628.51	16,370.45	12,292.63	13,602.56	10,542.54	20,940.95	29,454.07	55,732.61
17.6	50.8	47.2	24.5	26.5	15.6	39.2	8.1

## STATEMENT

## Balance Sheets of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality.....	Drumbo	Dublin	Dundas	Dunnville	Dutton
Population.....	P.V.	P.V.	5,137	3,412	801
ASSETS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....			9,235.96	3,328.13	
Substation equipment.....			13,396.22	27,302.17	
Distribution system—overhead...	4,331.18	5,787.61	49,443.83	34,614.10	9,349.96
Distribution system—underground					
Line transformers.....	1,417.47	897.65	19,416.12	15,919.94	3,413.45
Meters.....	1,764.22	874.11	19,805.04	14,569.51	3,259.83
Street light equipment, regular...	253.02	544.86	10,734.33	8,011.99	621.79
Street light equipment, ornamental					
Miscellaneous construction expense	266.20	787.06	8,472.08	5,963.34	338.94
Steam or hydraulic plant.....					
Old plant.....			1,867.38	10,717.62	
Total plant.....	8,032.09	8,891.29	132,370.96	120,426.80	16,983.97
Bank and cash balance.....	1,637.98	174.08	7,006.40	35.00	
Securities and investments.....			1,500.00	10,000.00	4,000.00
Accounts receivable.....	582.07	81.97	3,842.16	6,451.14	645.80
Inventories.....	91.25		557.10	1,372.17	34.47
Sinking fund on local debentures...					
Equity in H-E.P.C. systems.....	2,885.89	2,705.54	67,946.80	24,568.48	8,836.61
Other assets.....			107.99		
Total assets.....	13,229.28	11,852.88	213,331.41	162,853.59	30,500.85
Deficit.....		668.41			
Total.....	13,229.28	12,521.29	213,331.41	162,853.59	30,500.85
LIABILITIES					
Debenture balance.....	2,749.77	2,205.49	29,919.51	54,766.47	5,420.12
Accounts payable.....		1,143.89		8,753.51	
Bank overdraft.....				3,253.19	104.23
Other liabilities.....			2,018.29	865.00	11.84
Total liabilities.....	2,749.77	3,349.38	31,937.80	67,638.17	5,536.19
RESERVES					
For equity in H-E.P.C. systems...	2,885.89	2,705.54	67,946.80	24,568.48	8,836.61
For depreciation.....	2,617.63	2,471.86	35,812.61	20,845.06	4,876.77
Other reserves.....			250.00		
Total reserves.....	5,503.52	5,177.40	104,009.41	45,413.54	13,713.38
SURPLUS					
Debentures paid.....	1,750.23	3,994.51	23,080.49	20,733.53	2,987.37
Local sinking fund.....					
Operating surplus.....	3,225.76		54,303.71	29,068.35	8,263.91
Total surplus.....	4,975.99	3,994.51	77,384.20	49,801.88	11,251.28
Total liabilities, reserves and surplus	13,229.28	12,521.29	213,331.41	162,853.59	30,500.85
Percentage of net debt to total assets	26.6	36.6	22.0	48.9	25.6



## "A"—Continued

## Hydro Municipalities as at December 31, 1931

East Windsor 16,203	East York Twp. 30,556	Elmira 2,940	Elora 1,306	Embro 443	Erieau 202	Erie Beach 23	Essex 1,880
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	16,946.49	6,148.80	1,524.54	.....	.....	.....	.....
.....	8,217.77	.....	.....	.....	.....	.....	.....
165,159.97	267,742.72	34,385.13	16,831.38	8,878.99	9,066.67	1,866.97	35,702.89
.....	.....	.....	.....	.....	.....	.....	442.55
75,590.20	64,114.29	15,990.08	7,301.95	2,847.45	1,280.72	613.17	14,177.76
60,609.65	131,960.59	12,672.11	5,680.92	2,012.55	2,081.09	696.24	10,199.18
.....	19,923.78	1,253.52	1,119.21	491.90	241.10	.....	1,503.60
89,295.42	.....	.....	.....	.....	.....	.....	.....
3,439.78	16,941.83	4,622.63	1,414.10	69.45	379.90	375.03	2,942.96
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	2,168.08	1,425.47	429.25	.....	.....	.....
394,095.02	525,847.47	77,240.35	35,297.57	14,729.59	13,049.48	3,551.41	64,968.94
.....	1,307.80	291.72	1,642.14	1,157.46	57.21	82.33	919.97
.....	3,044.68	.....	5,000.00	.....	.....	.....	5,000.00
74,031.18	25,830.92	5,208.47	641.42	984.63	212.68	164.46	4,141.47
.....	7,505.83	104.24	711.44	.....	.....	.....	.....
99,513.31	79,123.33	38,848.19	18,607.91	5,300.72	2,031.91	542.42	12,074.22
683.08	.....	.....	45.00	.....	.....	.....	.....
568,322.59	642,660.03	121,692.97	61,945.48	22,172.40	15,351.28	4,340.62	87,104.60
.....	.....	.....	.....	.....	.....	8.86	.....
568,322.59	642,660.03	121,692.97	61,945.48	22,172.40	15,351.28	4,349.48	87,104.60
111,770.47	288,355.57	30,482.59	5,177.58	4,060.53	5,171.70	2,794.37	19,932.12
8,120.45	17,781.47	2,564.08	1.00	135.95	1,286.28	287.70	1,141.58
.....	10,111.67	.....	.....	.....	.....	.....	.....
89,295.42	11,629.62	524.65	45.00	.....	.....	.....	591.42
209,186.34	327,878.33	33,571.32	5,223.58	4,196.48	6,457.98	3,082.07	21,665.12
99,513.31	79,123.33	38,848.19	18,607.91	5,300.72	2,031.91	542.42	12,074.22
40,435.71	43,516.90	12,428.27	9,812.82	4,061.42	1,291.50	219.36	8,125.69
803.46	1,228.87	.....	.....	.....	.....	.....	.....
140,752.48	123,869.10	51,276.46	28,420.73	9,362.14	3,323.41	761.78	20,199.91
37,229.53	68,712.21	9,517.41	7,822.42	3,439.47	1,711.43	505.63	2,567.88
181,154.24	122,200.39	27,327.78	20,478.75	5,174.31	3,858.46	.....	42,671.69
218,383.77	190,912.60	36,845.19	28,301.17	8,613.78	5,569.89	505.63	45,239.57
568,322.59	642,660.03	121,692.97	61,945.48	22,172.40	15,351.28	4,349.48	87,104.60
31.6	58.2	40.5	12.0	24.9	48.4	81.1	28.9

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA

SYSTEM—Continued

Municipality.....	Etobicoke Twp.	Exeter	Fergus	Fonthill	Forest
Population.....	15,050	1,606	2,465	833	1,405
ASSETS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....	25,409.58	3,281.59			6,292.40
Substation equipment.....					
Distribution system—overhead...	255,793.05	24,401.94	32,177.05	10,395.18	19,883.53
Distribution system—underground					
Line transformers.....	61,288.90	10,379.45	15,075.95	4,408.80	9,452.79
Meters.....	47,101.20	7,829.79	11,338.65	4,331.41	8,998.56
Street light equipment, regular...	9,619.96	932.04	1,876.77	991.84	2,369.94
Street light equipment, ornamental	2,689.44				
Miscellaneous construction expense	5,027.29	2,498.68	1,496.19	3,684.64	1,259.66
Steam or hydraulic plant.....					
Old plant.....			2,546.59		11,042.87
Total plant.....	406,929.42	49,323.49	64,511.20	23,811.87	59,299.75
Bank and cash balance.....	3,332.26	4,051.53	1,162.00	733.31	2,430.15
Securities and investments.....		6,000.00			7,500.00
Accounts receivable.....	20,746.27	2,310.39	1,082.00	376.35	3,657.79
Inventories.....	54.02	3,225.52	66.54		2,211.89
Sinking fund on local debentures..					
Equity in H-E.P.C. systems.....	67,607.21	18,569.49	21,767.32	1,910.76	12,750.43
Other assets.....	6,702.54		116.66		
Total assets.....	505,371.72	83,480.42	88,705.72	26,832.29	87,850.01
Deficit.....					
Total.....	505,371.72	83,480.42	88,705.72	26,832.29	87,850.01
LIABILITIES					
Debenture balance.....	207,906.79	10,086.36	23,977.95	18,891.30	12,740.42
Accounts payable.....	25,866.43		3,596.59	849.80	
Bank overdraft.....					
Other liabilities.....	4,755.12	33.25	10.00	190.62	30.06
Total liabilities.....	238,528.34	10,119.61	27,584.54	19,931.72	12,770.48
RESERVES					
For equity in H-E.P.C. systems...	67,607.21	18,569.49	21,767.32	1,910.76	12,750.43
For depreciation.....	46,335.74	9,652.35	5,748.10	1,159.13	11,297.69
Other reserves.....		91.75			50.00
Total reserves.....	113,942.95	28,313.59	27,515.42	3,069.89	24,098.12
SURPLUS					
Debentures paid.....	57,788.61	9,913.69	18,022.05	3,608.70	21,659.58
Local sinking fund.....					
Operating surplus.....	95,111.82	35,133.53	15,583.71	221.98	29,321.83
Total surplus.....	152,900.43	45,047.22	33,605.76	3,830.68	50,981.41
Total liabilities, reserves and surplus	505,371.72	83,480.42	88,705.72	26,832.29	87,850.01
Percentage of net debt to total assets	54.2	15.6	41.2	80.0	17.0

## "A"—Continued

## Hydro Municipalities as at December 31, 1931

Galt 13,752	George- town 1,997	Glencoe 779	Goderich 4,113	Granton P.V.	Guelph 20,393	Hagers- ville 1,265	Hamilton 144,529
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
200,047.01	12.00		12,957.48		13,380.18		693,801.97
113,502.02			34,402.48		138,284.16	864.37	1,007,924.22
225,232.14	29,689.31	20,633.54	62,419.64	4,158.86	179,989.01	19,346.66	986,885.93
							576,072.73
117,223.45	18,111.46	6,311.20	19,972.60	1,533.55	83,088.61	9,751.82	566,764.58
70,850.94	12,665.82	4,205.38	16,869.43	1,522.86	88,859.09	8,227.03	540,615.43
72,648.73	1,362.22	1,714.63	4,825.17	163.37	41,192.61	976.69	194,063.61
24,973.80	2,644.00	3,654.60	5,467.07	113.08	15,149.32	1,311.68	208,208.67
	2,209.80		14,622.15				2,153,197.23
824,478.09	66,694.61	36,519.35	171,536.02	7,491.72	559,942.98	40,478.25	6,927,534.37
175.00	2,867.13	1,872.48	4,303.47	2,467.09	14,840.67	11,301.81	537,823.28
	8,432.41		500.00	2,000.00		7,000.00	
54,786.35	1,405.86	1,692.70	3,769.12	46.11	33,709.68	1,424.78	423,360.82
14,681.38	346.43		1,365.45		33,113.50	39.37	104,372.87
143,742.50					38,956.44		557,477.75
255,978.78	44,271.77	8,247.49	56,926.13	3,885.20	298,188.39	39,188.12	1,561,044.41
2,088.45							22,101.97
1,295,930.55	124,018.21	48,332.02	238,400.19	15,890.12	978,751.66	99,432.33	10,133,715.47
1,295,930.55	124,018.21	48,332.02	238,400.19	15,890.12	978,751.66	99,432.33	10,133,715.47
385,106.52	12,181.52	10,471.57	54,448.17	2,363.54	61,409.87	3,896.43	3,547,754.54
13,749.23	141.40		3,654.00	616.83	18,580.74		2,458,371.18
35,246.99							
6,885.92	3,170.77		1,518.49		2,584.28		152,965.61
440,988.66	15,493.69	10,471.57	59,620.66	2,980.37	82,574.89	3,896.43	6,159,091.33
255,978.78	44,271.77	8,247.49	56,926.13	3,885.20	298,188.39	39,188.12	1,561,044.41
205,812.62	16,865.62	5,236.31	48,264.09	1,701.61	45,814.60	6,751.45	674,652.31
31,084.29			1,055.77		663.44		174,750.36
492,875.69	61,137.39	13,483.80	106,245.99	5,586.81	344,666.43	45,939.57	2,410,447.08
132,895.43	7,818.48	9,641.31	41,639.88	1,136.46	83,590.12	4,103.57	671,270.58
143,742.50					38,956.44		557,477.75
85,428.27	39,568.65	14,735.34	30,893.66	6,186.48	428,963.78	45,492.76	335,428.73
362,066.20	47,387.13	24,376.65	72,533.54	7,322.94	551,510.34	49,596.33	1,564,177.06
1,295,930.55	124,018.21	48,332.02	238,400.19	15,890.12	978,751.66	99,432.33	10,133,715.47
33.2	19.4	26.1	32.9	24.8	6.8	6.5	69.9



# STATEMENT

## Balance Sheets of Electrical Departments of

### NIAGARA SYSTEM—Continued

Municipality.....	Harriston	Harrow	Hensall	Hespeler	Highgate
Population.....	1,325	830	727	2,769	315
<b>ASSETS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Lands and buildings.....				4,474.73	
Substation equipment.....	600.00			29,732.13	
Distribution system—overhead...	21,808.90	15,819.53	12,370.10	29,940.42	6,245.89
Distribution system—underground					
Line transformers.....	7,416.42	9,615.23	4,428.42	20,413.30	2,109.25
Meters.....	6,882.45	5,546.82	3,379.00	12,181.95	1,687.60
Street light equipment, regular...	1,141.41	733.84	612.83	6,850.86	430.26
Street light equipment, ornamental					
Miscellaneous construction expense	1,174.96	95.42	576.95	715.43	551.98
Steam or hydraulic plant.....					
Old plant.....	1,001.43		400.00		
Total plant.....	40,025.57	31,810.84	21,767.30	104,308.82	11,024.98
Bank and cash balance.....		1,454.99	5,515.91		1,816.58
Securities and investments.....					2,337.60
Accounts receivable.....	155.51	670.14	500.99	7,404.63	63.19
Inventories.....			4.22	407.10	
Sinking fund on local debentures..					
Equity in H-E.P.C. systems.....	15,267.24	7,819.94	6,605.34	42,369.55	4,891.18
Other assets.....					
Total assets.....	55,448.32	41,755.91	34,393.76	154,490.10	20,133.53
Deficit.....					
Total.....	55,448.32	41,755.91	34,393.76	154,490.10	20,133.53
<b>LIABILITIES</b>					
Debenture balance.....	12,448.77	9,261.93	7,988.57	40,226.73	3,373.60
Accounts payable.....	4,280.99	1,532.08	688.05	91.67	87.85
Bank overdraft.....	2,915.23			714.93	
Other liabilities.....		415.00	40.50	32.80	
Total liabilities.....	19,644.99	11,209.01	8,717.12	41,066.13	3,461.45
<b>RESERVES</b>					
For equity in H-E.P.C. systems...	15,267.24	7,819.94	6,605.34	42,369.55	4,891.18
For depreciation.....	3,809.67	696.23	4,607.73	8,829.55	2,649.12
Other reserves.....					
Total reserves.....	19,076.91	8,516.17	11,213.07	51,199.10	7,540.30
<b>SURPLUS</b>					
Debentures paid.....	13,369.26	2,738.07	4,011.43	37,343.78	1,626.40
Local sinking fund.....					
Operating surplus.....	3,357.16	19,292.66	10,452.14	24,881.09	7,505.38
Total surplus.....	16,726.42	22,030.73	14,463.57	62,224.87	9,131.78
Total liabilities, reserves and surplus	55,448.32	41,755.91	34,393.76	154,490.10	20,133.53
Percentage of net debt to total assets	48.9	33.0	31.4	36.6	22.7

## "A"—Continued

## Hydro Municipalities as at December 31, 1931

Humberstone 1,926	Ingersoll 5,150	Jarvis 479	Kingsville 2,200	Kitchener 30,274	Lambeth P.V.	La Salle 574	Leamington 5,313
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	15,064.45	.....	7,774.09	99,012.44	.....	.....	16,202.11
.....	25,374.39	.....	.....	213,980.95	.....	.....	7,085.62
25,879.05	53,645.57	9,034.30	30,973.91	303,370.77	6,884.86	18,714.13	48,396.09
.....	.....	.....	.....	37,043.81	.....	.....	9,514.36
9,181.25	25,982.43	2,526.96	12,536.28	164,676.46	1,883.12	6,716.60	22,141.10
7,966.05	24,678.73	2,253.40	12,268.59	170,436.41	2,112.07	4,130.47	22,001.54
884.80	3,533.12	846.99	1,384.89	61,506.62	269.16	946.49	1,380.13
.....	4,597.59	.....	19,200.00	86,939.84	.....	.....	15,178.49
2,910.22	11,484.81	536.27	226.97	16,676.49	300.71	1,917.19	1,696.80
.....	19,586.39	.....	.....	52,363.91	.....	.....	.....
46,821.37	183,947.48	15,197.92	84,364.73	1,206,007.70	11,449.92	32,424.88	143,596.24
5,141.80	825.29	2,670.83	4,622.28	75.00	1,749.18	5,624.21	5,358.89
.....	10,883.90	.....	8,000.00	15,000.00	.....	.....	11,000.00
387.96	7,902.43	423.51	2,835.34	78,364.62	829.71	1,181.37	781.02
.....	2,022.38	.....	.....	19,686.71	.....	.....	.....
.....	58,833.59	.....	.....	.....	.....	.....	.....
7,090.12	84,616.91	5,890.74	16,471.37	565,714.79	4,158.97	4,888.00	27,929.24
.....	.....	.....	.....	.....	.....	.....	.....
59,441.25	349,031.98	24,183.00	116,293.72	1,884,848.82	18,187.78	44,118.46	188,665.39
.....	.....	.....	.....	.....	.....	.....	.....
59,441.25	349,031.89	24,183.00	116,293.72	1,884,848.82	18,187.78	44,118.46	188,665.39
.....	.....	.....	.....	.....	.....	.....	.....
21,600.00	79,800.00	7,572.54	29,943.21	237,423.84	2,701.06	12,560.87	37,047.23
423.55	5,345.23	671.65	3,137.24	43,973.15	1,054.38	891.92	3,143.02
.....	.....	.....	.....	22,945.49	.....	.....	.....
880.29	4,845.09	.....	20,426.53	86,939.84	.....	502.21	17,246.27
22,903.84	89,990.32	8,244.19	53,506.98	391,282.32	3,755.44	13,955.00	57,436.52
.....	.....	.....	.....	.....	.....	.....	.....
7,090.12	84,616.91	5,890.74	16,471.37	565,714.79	4,158.97	4,888.00	27,929.24
3,429.87	10,652.35	1,847.97	13,206.73	211,522.81	2,240.96	3,690.44	14,622.78
.....	1,071.48	.....	.....	19,641.16	.....	.....	.....
10,519.99	96,340.74	7,738.71	29,678.10	796,878.76	6,399.93	8,578.44	42,552.02
.....	.....	.....	.....	.....	.....	.....	.....
10,400.00	.....	2,927.46	3,556.79	274,726.16	1,298.94	2,939.13	10,952.77
.....	58,833.59	.....	.....	.....	.....	.....	.....
15,617.42	103,867.33	5,272.64	29,551.85	421,961.58	6,733.47	18,645.89	77,724.08
26,017.42	162,700.92	8,200.10	33,108.64	696,687.74	8,032.41	21,585.02	88,676.85
59,441.25	349,031.98	24,183.00	116,293.72	1,884,848.82	18,187.78	44,118.46	188,665.39
.....	.....	.....	.....	.....	.....	.....	.....
43.8	13.2	45.1	42.6	23.1	26.8	35.6	29.0

# STATEMENT

## Balance Sheets of Electrical Departments of

### NIAGARA SYSTEM—Continued

Municipality.....	Listowel	London	London Twp.	Long Branch P.V.	Lucan
Population.....	2,712	69,742	7,932		588
<b>ASSETS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Lands and buildings.....	1,416.07	449,250.66			
Substation equipment.....		924,660.49			
Distribution system—overhead...	37,595.05	748,232.64	16,629.68	50,201.26	10,464.48
Distribution system—underground	2,802.50	245,932.50			
Line transformers.....	17,020.03	273,298.96	5,570.60	11,499.67	4,131.49
Meters.....	15,510.62	309,892.94	3,697.62	15,657.07	3,071.22
Street light equipment, regular...	1,831.02	66,431.59	849.26	3,343.14	410.87
Street light equipment, ornamental	1,348.66	84,746.73			
Miscellaneous construction expense	2,553.96	96,788.05	478.71	1,220.51	484.77
Steam or hydraulic plant.....					
Old plant.....	4,745.30		1,733.80		2,860.45
Total plant.....	84,823.21	3,199,234.56	28,959.67	81,921.65	21,423.28
Bank and cash balance.....	7,597.11	30,692.50	4,538.96		1,349.07
Securities and investments.....					5,000.00
Accounts receivable.....	579.86	237,418.71	2,663.81	2,099.37	491.52
Inventories.....		93,686.68			
Sinking fund on local debentures..		325,742.49			
Equity in H-E.P.C. systems.....	31,878.42	1,016,783.11	5,277.04	1,693.80	9,502.84
Other assets.....	140.72				
Total assets.....	125,019.32	4,903,558.05	41,439.48	85,714.82	37,766.71
Deficit.....					
Total.....	125,019.32	4,903,558.05	41,439.48	85,714.82	37,766.71
<b>LIABILITIES</b>					
Debenture balance.....	11,040.78	1,062,660.56	12,884.20	28,699.22	4,829.39
Accounts payable.....	2,762.70	182,157.04	2,303.48	7,886.32	41.81
Bank overdraft.....					
Other liabilities.....	1,504.38	84,746.73	60.00	1,926.50	120.00
Total liabilities.....	15,307.86	1,329,564.33	15,247.68	38,512.04	4,991.20
<b>RESERVES</b>					
For equity in H-E.P.C. systems...	31,878.42	1,016,783.11	5,277.04	1,693.80	9,502.84
For depreciation.....	22,363.02	709,001.11	3,089.99	10,769.37	5,916.45
Other reserves.....		66,944.12			
Total reserves.....	54,241.44	1,792,728.34	8,367.03	12,463.17	15,419.29
<b>SURPLUS</b>					
Debentures paid.....	32,149.11	519,239.44	6,115.80	11,605.38	6,384.23
Local sinking fund.....		325,742.49			
Operating surplus.....	23,320.91	936,283.45	11,708.97	23,134.23	10,971.99
Total surplus.....	55,470.02	1,781,265.38	17,824.77	34,739.61	17,356.22
Total liabilities, reserves and surplus	125,019.32	4,903,558.05	41,439.48	85,714.82	37,766.71
Percentage of net debt to total assets	15.2 ~	25.8	42.2	45.8	17.7



## "A"—Continued

## Hydro Municipalities as at December 31, 1931

Lynden P.V.	Markham 931	Merlin P.V.	Merritton 2,596	Milton 1,775	Milverton 981	Mimico 6,108	Mitchell 1,593
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
241.18			2,951.67		237.20	14,321.10	12,649.72
4,721.67	14,345.02	8,042.18	32,689.04	11,868.94		38,196.44	21,287.83
			33,865.42	20,220.36	11,335.41	69,861.02	28,433.05
2,134.21	7,090.76	3,274.17	6,177.28	13,578.20	7,565.80	25,909.82	7,933.61
1,496.46	5,283.25	2,235.70	9,255.91	12,640.85	4,951.19	26,069.38	11,441.31
324.16	648.65	555.64	4,412.98	1,275.61	737.16	7,314.89	2,469.33
193.57	1,558.86	455.36	2,428.96	4,205.66	876.41	4,376.75	847.27
		241.85		3,092.54			1,500.00
9,111.25	28,926.54	14,804.90	91,781.26	66,882.16	25,703.17	186,049.40	86,562.12
605.66	136.70	2,540.13	7,202.61	12,825.80	50.00		5,254.36
	2,437.17	6,000.00			3,000.00		2,500.00
283.28	1,148.05	975.28	423.43	9,775.79		3,958.57	6,853.23
				7,045.74			2,890.50
7,232.55	6,930.73	5,881.81	34,523.09	53,576.85	23,298.17	57,608.49	20,346.08
						1,227.01	
17,232.74	39,579.19	30,202.12	133,930.39	150,106.34	52,051.34	248,843.47	124,406.29
17,232.74	39,579.19	30,202.12	133,930.39	150,106.34	52,051.34	248,843.47	124,406.29
2,966.23	1,965.35	9,026.82	22,992.89	9,506.39	2,785.23	73,190.82	
154.99	61.05	1,233.19	453.46	1,728.72	1,298.23	11,626.55	1,942.29
					458.55	1,835.34	
	15.00					3,945.00	20.00
3,121.22	2,041.40	10,260.01	23,446.35	11,235.11	4,542.01	90,597.71	1,962.29
7,232.55	6,930.73	5,881.81	34,523.09	53,576.85	23,298.17	57,608.49	20,346.08
1,926.13	4,305.55	1,648.70	3,837.23	12,595.35	3,902.61	32,956.77	28,050.85
				195.44		360.00	
9,158.68	11,236.28	7,530.51	38,360.32	66,367.64	27,200.78	90,925.26	48,396.93
1,528.77	9,408.28	4,337.39	9,193.32	23,206.59	6,714.77	33,809.18	22,295.22
3,424.07	16,893.23	8,074.21	62,930.40	49,297.00	13,593.78	33,511.32	51,751.85
4,952.84	26,301.51	12,411.60	72,123.72	72,503.59	20,308.55	67,320.50	74,047.07
17,232.74	39,579.19	30,202.12	133,930.39	150,106.34	52,051.34	248,843.47	124,406.29
31.2	6.3	42.2	23.6	11.6	15.8	47.4	1.9

# STATEMENT

## Balance Sheets of Electrical Departments of

### NIAGARA SYSTEM—Continued

Municipality.....	Moorefield	Mount Brydges	Newbury	New Hamburg	New Toronto
Population.....	P.V.	P.V.	291	1,409	6,310
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
<b>ASSETS</b>					
Lands and Buildings.....				2,513.19	43,741.58
Substation equipment.....				1,167.55	
Distribution system—overhead...	2,980.96	6,233.15	6,422.17	23,411.57	74,594.81
Distribution system—underground					8,605.69
Line transformers.....	990.72	1,709.69	1,767.86	7,150.37	27,509.18
Meters.....	1,148.22	2,183.48	1,168.37	8,789.74	27,359.16
Street light equipment, regular...	295.88	629.66	817.42	2,065.70	9,602.47
Street light equipment, ornamental					
Miscellaneous construction expense	348.35	152.82	485.13	1,324.33	8,213.22
Steam or hydraulic plant.....					
Old plant.....			348.22	5,242.56	
Total plant.....	5,764.13	10,908.80	11,009.17	51,665.01	199,626.11
Bank and cash balance.....	2,209.99	3,248.09	987.21		
Securities and investments.....		2,000.00			
Accounts receivable.....	19.20	1,117.03	1.97	1,291.92	7,649.09
Inventories.....				1,076.68	
Sinking fund on local debentures..					
Equity in H-E.P.C. systems.....	2,830.90	3,034.90	1,878.28	23,652.19	186,665.92
Other assets.....					4,406.84
Total assets.....	10,824.22	20,308.82	13,876.63	77,685.80	398,347.96
Deficit.....					
Total.....	10,824.22	20,308.82	13,876.63	77,685.80	398,347.96
<b>LIABILITIES</b>					
Debenture balance.....	1,905.24	2,647.25	5,400.00	8,322.79	4,612.53
Accounts payable.....	280.62			224.27	6.51
Bank overdraft.....				2,525.94	6,880.63
Other liabilities.....				79.00	4,406.84
Total liabilities.....	2,185.86	2,647.25	5,400.00	11,152.00	15,906.51
<b>RESERVES</b>					
For equity in H-E.P.C. systems...	2,830.90	3,034.90	1,878.28	23,652.19	186,665.92
For depreciation.....	1,734.04	1,653.44	1,801.13	9,840.59	33,362.12
Other reserves.....				192.35	2,727.82
Total reserves.....	4,564.94	4,688.34	3,679.41	33,685.13	222,755.86
<b>SURPLUS</b>					
Debentures paid.....	2,594.76	1,572.75	4,354.39	9,406.29	3,387.47
Local sinking fund.....					
Operating surplus.....	1,478.66	11,400.48	442.83	23,442.38	156,298.12
Total surplus.....	4,073.42	12,973.23	4,797.22	32,848.67	159,685.59
Total liabilities, reserves and surplus	10,824.22	20,308.82	13,876.63	77,685.80	398,347.96
Percentage of net debt to total assets	27.3	15.3	45.0	20.6	7.5

## “A”—Continued

## Hydro Municipalities as at December 31, 1931

Niagara Falls 18,539	Niagara on-the-Lake 1,633	North York Twp. 11,006	Norwich 1,101	Oil Springs 445	Otterville P.V.	Palmerston 1,758	Paris 4,205
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
132,198.34	2,307.35	28,238.33	4,157.99	1,292.23	.....	691.88	8,133.56
228,632.76	16,048.36	.....	.....	.....	.....	.....	27,914.17
190,679.07	26,038.39	296,708.61	10,514.97	12,289.07	5,393.43	26,111.46	51,276.87
.....	.....	.....	.....	.....	.....	.....	.....
155,754.54	6,298.05	68,911.58	6,089.50	5,386.13	2,670.00	8,810.81	19,330.59
110,893.86	7,088.66	37,071.61	6,697.29	3,275.37	2,227.30	8,954.57	18,622.66
118,580.91	1,230.44	13,616.66	4,685.64	305.72	1,338.28	2,107.48	13,479.95
.....	.....	.....	.....	.....	.....	.....	.....
12,743.80	1,933.40	16,006.77	1,788.37	2,859.19	142.00	2,008.76	499.51
.....	.....	.....	.....	.....	.....	.....	.....
21,722.55	.....	.....	3,509.82	.....	.....	4,018.71	.....
.....	.....	.....	.....	.....	.....	.....	.....
971,205.83	60,944.65	460,553.56	37,443.58	25,407.71	11,771.01	52,703.67	139,257.31
.....	.....	.....	.....	.....	.....	.....	.....
29,238.90	244.16	2,644.47	1,234.25	2,222.79	6,041.14	.....	5,328.22
.....	.....	.....	3,000.00	685.92	.....	.....	6,000.00
7,425.43	1,817.67	9,109.88	1,721.60	316.79	1,061.10	47.69	2,407.13
110.28	1,608.83	.....	1,471.98	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	23,317.65
258,025.19	12,559.20	29,587.91	17,626.88	12,165.18	3,606.24	19,083.01	53,319.39
2,548.83	.....	3,957.26	.....	.....	.....	144.46	.....
.....	.....	.....	.....	.....	.....	.....	.....
1,268,554.46	77,174.51	505,853.08	62,498.29	40,798.39	22,479.49	71,978.83	229,629.70
.....	.....	.....	.....	.....	.....	.....	.....
1,268,554.46	77,174.51	505,853.08	62,498.29	40,798.39	22,479.49	71,978.83	229,629.70
.....	.....	.....	.....	.....	.....	.....	.....
399,095.15	23,206.86	320,859.08	7,128.73	7,137.81	1,359.49	5,788.55	35,817.88
13,666.32	1,951.56	847.88	.....	358.83	426.79	2,799.05	.....
.....	.....	.....	.....	.....	.....	1,084.92	.....
14,180.06	.....	57,431.03	63.50	.....	.....	142.50	.....
.....	.....	.....	.....	.....	.....	.....	.....
426,941.53	25,158.42	379,137.99	7,192.23	7,496.64	1,786.28	9,815.02	35,817.88
.....	.....	.....	.....	.....	.....	.....	.....
258,025.19	12,559.20	29,587.91	17,626.88	12,165.18	3,606.24	19,083.01	53,319.39
101,914.54	6,064.32	36,283.69	3,464.81	4,911.66	3,175.07	5,500.63	49,862.41
5,201.79	.....	.....	1,000.00	.....	.....	534.45	.....
.....	.....	.....	.....	.....	.....	.....	.....
365,141.52	18,623.52	65,871.60	22,091.69	17,076.84	6,781.31	25,118.09	103,181.80
.....	.....	.....	.....	.....	.....	.....	.....
291,147.85	13,294.56	42,162.79	6,627.27	9,583.50	3,140.51	21,211.45	56,182.12
.....	.....	.....	.....	.....	.....	.....	23,317.65
185,323.56	20,098.01	18,680.70	26,587.10	6,641.41	10,771.39	15,834.27	11,130.25
.....	.....	.....	.....	.....	.....	.....	.....
476,471.41	33,392.57	60,843.49	33,214.37	16,224.91	13,911.90	37,045.72	90,630.02
.....	.....	.....	.....	.....	.....	.....	.....
1,268,554.46	77,174.51	505,853.08	62,498.29	40,798.39	22,479.49	71,978.83	229,629.70
.....	.....	.....	.....	.....	.....	.....	.....
42.2	38.9	77.5	16.0	26.2	9.5	18.6	8.2



**STATEMENT**

**Balance Sheets of Electrical Departments of**

**NIAGARA  
SYSTEM—Continued**

Municipality.....	Parkhill	Petrolia	Plattsville	Point Edward	Port Colborne
Population.....	968	2,532	P.V.	1,232	6,202
<b>ASSETS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Lands and buildings.....		900.00			22,561.01
Substation equipment.....		2,403.55			
Distribution system—overhead... 15,886.04		40,450.44	3,764.40	20,068.72	85,572.97
Distribution system—underground					
Line transformers..... 4,357.17		25,580.57	1,252.37	5,773.49	23,392.21
Meters..... 3,975.46		14,870.18	1,843.98	4,776.50	21,384.18
Street light equipment, regular... 898.23		4,849.35	147.15	2,985.52	4,520.69
Street light equipment, ornamental					16,611.59
Miscellaneous construction expense 1,464.19		6,264.86	535.92	503.14	6,878.35
Steam or hydraulic plant.....					
Old plant.....		3,389.94			9,929.60
Total plant.....	26,581.09	98,708.89	7,543.82	34,107.37	190,850.60
Bank and cash balance..... 591.37		849.46	145.94		8,406.55
Securities and investments.....		8,400.00		13,000.00	
Accounts receivable..... 652.67		4,126.24	778.58	2,688.23	7,633.85
Inventories.....		948.52			3,437.79
Sinking fund on local debentures..					
Equity in H-E.P.C. systems..... 7,912.41		47,049.97	4,145.21	20,045.75	37,787.73
Other assets.....					20.00
Total assets.....	35,737.54	160,083.08	12,613.55	69,841.35	248,136.52
Deficit.....					
Total.....	35,737.54	160,083.08	12,613.55	69,841.35	248,136.52
<b>LIABILITIES</b>					
Debenture balance..... 7,976.47		28,602.35	3,200.24	9,833.06	106,603.50
Accounts payable..... 135.79				342.65	4,792.78
Bank overdraft.....				53.02	
Other liabilities..... 48.00		380.00		947.31	18,001.59
Total liabilities.....	8,160.26	28,982.35	3,200.24	11,176.04	129,397.87
<b>RESERVES</b>					
For equity in H-E.P.C. systems... 7,912.41		47,049.97	4,145.21	20,045.75	37,787.73
For depreciation..... 3,893.32		22,091.26	2,319.33	7,609.27	22,647.38
Other reserves.....					500.00
Total reserves.....	11,805.73	69,141.23	6,464.54	27,655.02	60,935.11
<b>SURPLUS</b>					
Debentures paid..... 6,653.55		21,397.65	2,036.76	7,166.94	39,396.50
Local sinking fund.....					
Operating surplus..... 9,118.00		40,561.85	912.01	23,843.35	18,407.04
Total surplus.....	15,771.55	61,959.50	2,948.77	31,010.29	57,803.54
Total liabilities, reserves and surplus	35,737.54	160,083.08	12,613.55	69,841.35	248,136.52
Percentage of net debt to total assets	29.3	25.6	37.8	22.4	58.2

## "A"—Continued

## Hydro Municipalities as at December 31, 1931

Port Credit 1,600	Port Dalhousie 1,555	Port Dover 1,625	Port Rowan 558	Port Stanley 693	Preston 6,171	Princeton P.V.	Queenston P.V.
\$ c. 675.00	\$ c.	\$ c. 248.75	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
23,695.89	17,926.72	29,334.58	9,528.07	19,845.65	50,602.15 89,688.07	4,057.27	7,205.06
8,592.13	8,179.09	10,234.36	1,676.62	9,763.53	48,189.01	2,473.48	1,759.85
8,844.81	9,169.42	6,635.42	1,751.55	8,199.79	39,179.37	1,223.65	1,536.99
4,898.26	1,041.19	2,537.31	888.04	1,517.88	5,425.03	176.10	422.43
913.99	2,683.98	2,579.05	681.53	6,119.30	6,868.88	64.35	2,081.11
	6,018.38			577.51	32,126.75		
47,620.08	45,018.78	51,569.47	14,525.81	47,594.46	272,079.26	7,994.85	13,005.44
5,210.71	750.17	155.33	962.86	1,143.88		588.82	51.25
	3,000.00			3,000.00	6,000.00		
1,408.86	2,659.21	2,207.97	1,424.45	661.72	19,208.48	1,435.45	254.40
	2,187.61				192.94		
14,974.51	12,693.36	9,413.45	2,397.19	17,795.02	128,864.76	3,277.97	2,967.86
252.51							
69,466.67	66,309.13	63,346.22	19,310.31 6,448.71	70,195.08	426,345.44	13,297.09	16,278.95
69,466.67	66,309.13	63,346.22	25,759.02	70,195.08	426,345.44	13,297.09	16,278.95
9,480.98	11,994.78	14,573.12	9,691.86	9,009.76	62,654.42	2,169.31	6,540.36
1,493.33	143.02	3,405.87	11,228.83		8,430.91		376.64
					994.16		
240.00	40.00	604.00		30.26	60.00		
11,214.31	12,177.80	18,582.99	20,920.69	9,040.02	72,139.49	2,169.31	6,917.00
14,974.51	12,693.36	9,413.45	2,397.19	17,795.02	128,864.76	3,277.97	2,967.86
11,395.12	3,665.48	5,435.72	1,133.00	8,084.54	79,720.72	1,875.84	1,921.45
26,369.63	16,358.84	14,849.17	3,530.19	25,879.56	208,585.48	5,153.81	4,889.31
5,019.02	10,505.22	14,426.88	1,308.14	9,940.24	90,145.58	1,380.69	2,959.64
	2,187.61						
26,863.71	25,079.66	15,487.18		25,335.26	55,474.89	4,593.28	1,513.00
31,882.73	37,772.49	29,914.06	1,308.14	35,275.50	145,620.47	5,973.97	4,472.64
69,466.67	66,309.13	63,346.22	25,759.02	70,195.08	426,345.44	13,297.09	16,278.95
20.6	19.4	34.5	123.7	17.3	24.3	21.7	52.0

**STATEMENT**

**Balance Sheets of Electrical Departments of**

**NIAGARA  
SYSTEM—Continued**

Municipality.....	Richmond Hill 1,197	Ridgetown 1,981	Riverside 5,125	Rockwood P.V.	Rodney 690
Population.....					
<b>ASSETS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Lands and buildings.....				79.00	
Substation equipment.....	600.00	1,024.24			
Distribution system—overhead...	10,388.52	21,247.43	90,264.19	7,273.11	11,187.44
Distribution system—underground					
Line transformers.....	7,092.21	9,852.66	30,431.32	2,481.27	2,971.48
Meters.....	4,316.07	9,265.01	22,902.89	2,590.44	3,476.27
Street light equipment, regular...	1,333.57	3,494.29		544.02	639.99
Street light equipment, ornamental		1,431.73	17,030.71		
Miscellaneous construction expense	35.23	3,111.77	4,571.45	440.35	792.65
Steam or hydraulic plant.....					
Old plant.....		5,088.46			700.00
Total plant.....	23,765.60	54,515.59	165,200.56	13,408.19	19,767.83
Bank and cash balance.....	1,023.56	607.67		513.39	391.09
Securities and investments.....		13,000.00			3,000.00
Accounts receivable.....	1,563.00	779.26	12,556.67	683.08	50.91
Inventories.....	38.57	865.78		122.85	
Sinking fund on local debentures..					
Equity in H-E.P.C. systems.....	5,710.98	18,432.51	31,726.76	5,115.19	5,300.11
Other assets.....			270.68		
Total assets.....	32,101.71	88,200.81	209,754.67	19,842.70	28,509.94
Deficit.....					
Total.....	32,101.71	88,200.81	209,754.67	19,842.70	28,509.94
<b>LIABILITIES</b>					
Debenture balance.....	5,432.04	7,090.81	61,197.94	2,500.00	5,870.59
Accounts payable.....	108.96		3,455.10	34.71	186.35
Bank overdraft.....					
Other liabilities.....		1,670.93	17,030.71	21.00	57.50
Total liabilities.....	5,541.00	8,761.74	81,683.75	2,555.71	6,114.44
<b>RESERVES</b>					
For equity in H-E.P.C. systems...	5,710.98	18,432.51	31,726.76	5,115.19	5,300.11
For depreciation.....	686.40	9,637.39	20,088.40	3,902.13	1,000.96
Other reserves.....			502.59		
Total reserves.....	6,397.38	28,069.90	52,317.75	9,017.32	6,301.07
<b>SURPLUS</b>					
Debentures paid.....	6,767.96	12,365.18	21,302.06	2,000.00	2,629.41
Local sinking fund.....					
Operating surplus.....	13,395.37	39,003.99	54,451.11	6,269.67	13,465.02
Total surplus.....	20,163.33	51,369.17	75,753.17	8,269.67	16,094.43
Total liabilities, reserves and surplus	32,101.71	88,200.81	209,754.67	19,842.70	28,509.94
Percentage of net debt to total assets	21.0	10.7	40.2	17.4	26.4



## "A"—Continued

## Hydro Municipalities as at December 31, 1931

St. Catharines 25,347	St. Clair Beach 115	St. George P.V.	St. Jacobs P.V.	St. Marys 4,073	St. Thomas 16,869	Sandwich 11,819	Sarnia 17,003
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
47,378.92				3,000.00	73,053.81	541.70	111,241.65
114,617.11				24,691.28	108,888.01	4,097.56	201,688.59
202,126.33	7,785.49	5,925.49	6,389.42	51,967.99	108,112.44	107,615.45	202,685.30
					34,958.29		
133,812.36	2,492.83	2,799.42	2,539.38	18,936.23	54,199.58	46,852.57	72,620.29
83,705.70	1,469.39	2,757.07	2,442.26	21,297.57	67,102.09	50,269.85	70,805.81
18,352.98		230.27	390.26	3,558.47	21,249.43	11,605.41	25,358.08
27,448.87					3,693.04	51,239.13	7,482.11
41,980.21	149.27	374.18	460.55	3,902.90	12,355.83	8,989.26	25,161.56
7,792.05				20,696.85		4,148.96	55,495.72
677,214.53	11,896.98	12,086.43	12,221.87	148,051.29	483,612.52	285,359.89	772,539.11
4,095.75		180.39	411.39		500.00	13,980.60	
11,969.06		2,000.00	3,000.00		53,206.81	21,659.37	
18,726.48	2,153.86	252.03	237.29	6,163.18	21,007.66	8,325.02	45,530.49
653.44		25.00		3,231.20	374.46	395.22	19,771.20
58,508.02				16,249.09			
229,011.38	2,710.18	6,077.42	6,343.61	62,168.88	212,411.29	96,295.06	255,189.01
			102.98				
1,000,178.66	16,761.02	20,621.27	22,317.14	235,863.64	771,112.74	426,015.16	1,093,029.81
1,000,178.66	16,761.02	20,621.27	22,317.14	235,863.64	771,112.74	426,015.16	1,093,029.81
230,905.68	4,309.36	3,764.81	2,507.80	34,315.05	37,802.70	110,403.21	169,176.85
54,970.22	215.33	429.66	71.00	8,800.00		2,582.35	
				5,748.64	5,230.82		29,918.79
27,448.87		57.50	102.98	47.50	11,079.01	62,047.00	12,899.92
313,324.77	4,524.69	4,251.97	2,681.78	48,911.19	54,112.53	175,032.56	211,995.56
229,011.38	2,710.18	6,077.42	6,343.61	62,168.88	212,411.29	96,295.06	255,189.01
117,745.61	1,679.68	1,751.35	2,396.52	42,237.21	74,466.40	29,168.54	97,213.26
13,384.92				209.05	469.95		279.39
360,141.91	4,389.86	7,828.77	8,740.13	104,615.14	287,347.64	125,463.60	352,681.66
71,117.23	2,032.09	2,235.19	3,492.20	54,931.97	101,141.37	35,169.82	168,823.15
58,508.02				16,249.09			
197,086.73	5,814.38	6,305.34	7,403.03	11,156.25	328,511.20	90,349.18	359,529.44
326,711.98	7,846.47	8,540.53	10,895.23	82,337.31	429,652.57	125,519.00	528,352.59
1,000,178.66	16,761.02	20,621.27	22,317.14	235,863.64	771,112.74	426,015.16	1,093,029.81
33.2	32.2	29.2	16.8	20.7	9.1	44.5	24.3

# STATEMENT

## Balance Sheets of Electrical Departments of

### NIAGARA SYSTEM—Continued

Municipality.....	Scarboro' Twp. 18,212	Seaforth 1,689	Simcoe 5,044	Springfield 404	Stamford Twp. 7,128
Population.....					
<b>ASSETS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Lands and buildings.....	16,585.49	1,251.57	7,978.20		7,196.71
Substation equipment.....	301.95	5,999.16	22,906.67		37,384.60
Distribution system—overhead...	261,434.07	27,824.80	47,609.49	7,861.45	120,174.87
Distribution system—underground					
Line transformers.....	56,912.23	9,522.90	22,911.26	2,374.19	42,161.58
Meters.....	62,297.23	8,397.14	21,565.48	1,930.68	29,410.72
Street light equipment, regular...	19,721.73	1,414.55	5,926.89	546.24	8,785.31
Street light equipment, ornamental			2,527.16		
Miscellaneous construction expense	7,441.82	418.38	6,238.78	691.36	13,038.39
Steam or hydraulic plant.....					
Old plant.....			927.92		13,743.66
Total plant.....	424,694.52	54,828.50	138,591.85	13,403.92	271,895.84
Bank and cash balance.....	2,229.71	7.15	2,055.23	372.94	18,612.97
Securities and investments.....		13,100.00		5,500.00	
Accounts receivable.....	15,004.33	4,680.67	3,496.43	108.00	12,994.15
Inventories.....		2,945.85	254.58		6,921.23
Sinking fund on local debentures...		13,273.49			
Equity in H-E.P.C. systems.....	60,347.94	31,444.96	36,625.50	4,259.90	36,505.83
Other assets.....					383.11
Total assets.....	502,276.50	120,280.62	181,023.59	23,644.76	347,313.13
Deficit.....					
Total.....	502,276.50	120,280.62	181,023.59	23,644.76	347,313.13
<b>LIABILITIES</b>					
Debenture balance.....	219,448.12	25,000.00	60,688.78	3,939.46	191,598.52
Accounts payable.....	466.86		4,268.05	101.01	226.94
Bank overdraft.....	2,039.68	842.15			
Other liabilities.....	23,166.35	20.00	3,590.00	92.00	3,619.51
Total liabilities.....	245,121.01	25,862.15	68,546.83	4,132.47	195,444.97
<b>RESERVES</b>					
For equity in H-E.P.C. systems...	60,347.94	31,444.96	36,625.50	4,259.90	36,505.83
For depreciation.....	48,337.06	16,101.04	14,817.82	1,782.43	18,680.58
Other reserves.....		1,106.96			734.19
Total reserves.....	108,685.00	48,652.96	51,443.32	6,042.33	55,920.60
<b>SURPLUS</b>					
Debentures paid.....	71,120.15		14,746.12	5,560.54	48,679.65
Local sinking fund.....		13,273.49			
Operating surplus.....	77,350.34	32,492.02	46,287.32	7,909.42	47,267.91
Total surplus.....	148,470.49	45,765.51	61,033.44	13,469.96	95,947.56
Total liabilities, reserves and surplus	502,276.50	120,280.62	181,023.59	23,644.76	347,313.13
Percentage of net debt to total assets	55.4	16.7	46.5	21.3	62.9

## “A”—Continued

## Hydro Municipalities as at December 31, 1931

Stouffville 1,070	Stratford 18,909	Strathroy 2,755	Sutton 831	Tavistock 959	Tecumseh 2,560	Thames- ford P.V.	Thames- ville 884
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	135,191.94	7,149.98	.....	234.02	.....	.....	627.37
.....	136,903.19	21,776.34	.....	.....	.....	.....	.....
12,255.19	152,568.89	45,771.96	19,109.30	13,273.34	34,318.07	7,544.60	11,689.20
.....	.....	.....	.....	.....	.....	.....	.....
3,822.57	93,139.60	18,631.17	6,289.03	5,915.06	10,039.18	2,603.58	5,160.49
3,691.95	85,584.26	14,001.93	5,386.34	4,645.66	10,501.57	2,426.06	3,845.51
1,436.43	20,892.28	5,731.38	1,436.80	931.82	.....	332.25	1,379.42
.....	.....	.....	.....	.....	4,760.95	.....	.....
381.93	17,588.99	1,841.13	1,464.39	567.28	1,262.48	214.02	904.74
.....	.....	.....	.....	.....	.....	.....	.....
3,866.37	16,150.00	18,609.15	675.00	.....	.....	.....	4,445.68
.....	.....	.....	.....	.....	.....	.....	.....
25,454.44	658,019.15	133,513.04	34,360.86	25,567.18	60,882.25	13,120.51	28,052.41
.....	.....	.....	.....	.....	.....	.....	.....
2,332.90	600.00	4,141.25	1,506.95	1,614.52	.....	1,026.61	1,745.36
5,000.00	21,900.00	.....	.....	4,022.51	.....	7,500.00	5,000.00
794.83	59,964.55	5,117.07	751.69	510.74	1,777.55	362.02	935.70
.....	10,085.96	2,679.25	.....	.....	.....	.....	4.70
.....	175,951.66	.....	.....	.....	.....	.....	.....
5,688.12	273,373.55	38,031.17	4,974.32	19,110.50	9,891.42	7,786.57	7,653.35
.....	.....	.....	.....	.....	70.96	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
39,270.29	1,199,894.87	183,481.78	41,593.82	50,825.45	72,622.18	29,795.71	43,391.52
.....	.....	.....	.....	.....	.....	.....	.....
39,270.29	1,199,894.87	183,481.78	41,593.82	50,825.45	72,622.18	29,795.71	43,391.52
.....	.....	.....	.....	.....	.....	.....	.....
9,575.24	412,000.00	38,551.19	18,914.56	4,051.29	17,343.17	2,064.58	5,264.43
.....	219.50	.....	2,478.70	.....	5,768.37	.....	19.45
.....	18,221.81	.....	.....	.....	.....	.....	.....
.....	1,237.90	358.00	100.00	.....	4,760.95	5.00	.....
.....	.....	.....	.....	.....	.....	.....	.....
9,575.24	431,679.21	38,909.19	21,493.26	4,051.29	27,872.49	2,069.58	5,283.88
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
5,688.12	273,373.55	38,031.17	4,974.32	19,110.50	9,891.42	7,786.57	7,653.35
1,239.98	172,843.06	21,447.87	3,308.52	6,157.71	8,240.12	4,011.11	4,806.75
.....	1,088.56	425.00	.....	.....	208.09	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
6,928.10	447,305.17	59,904.04	8,282.84	25,268.21	18,339.63	11,797.68	12,460.10
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
8,965.03	43,800.00	27,680.81	7,085.44	1,948.71	8,656.83	3,293.45	5,923.37
.....	175,951.66	.....	.....	.....	.....	.....	.....
13,801.92	101,158.83	56,987.74	4,732.28	19,557.24	17,753.23	12,635.00	19,724.17
.....	.....	.....	.....	.....	.....	.....	.....
22,766.95	320,910.49	84,668.55	11,817.72	21,505.95	26,410.06	15,928.45	25,647.54
.....	.....	.....	.....	.....	.....	.....	.....
39,270.29	1,199,894.87	183,481.78	41,593.82	50,825.45	72,622.18	29,795.71	43,391.52
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
28.5	34.1	26.8	58.7	12.8	39.9	9.4	14.8



**STATEMENT**

**Balance Sheets of Electrical Departments of**

**NIAGARA  
SYSTEM—Continued**

Municipality.....	Thedford	Thorndale	Thorold	Tilbury	Tillson- burg
Population.....	539	P.V.	5,000	1,905	3,189
<b>ASSETS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Lands and buildings.....			9,892.59	969.46	6,918.30
Substation equipment.....					13,937.52
Distribution system—overhead....	8,860.82	3,203.12	30,054.31	13,618.72	39,372.46
Distribution system—underground					
Line transformers.....	2,686.63	1,559.98	13,702.42	11,983.29	14,586.24
Meters.....	2,132.18	1,714.84	19,614.31	7,325.14	15,283.47
Street light equipment, regular....	885.46	181.19	2,762.69	1,001.16	3,854.60
Street light equipment, ornamental					
Miscellaneous construction expense	1,646.81	310.45	5,619.75	1,522.82	3,068.59
Steam or hydraulic plant.....			13,175.95		
Old plant.....	433.78			3,049.47	
Total plant.....	16,645.68	6,969.58	94,822.02	39,470.06	97,021.18
Bank and cash balance.....	238.32	1,433.96	7,105.38	1,541.20	2,230.07
Securities and investments.....	2,000.00			10,000.00	18,000.00
Accounts receivable.....	25.91	112.20	1,645.52	1,186.21	3,057.61
Inventories.....			106.26		2,071.77
Sinking fund on local debentures..					
Equity in H-E.P.C. systems.....	3,699.82	4,294.94	32,733.02	19,803.88	38,814.94
Other assets.....					
Total assets.....	22,609.73	12,810.68	136,412.20	72,001.35	161,195.57
Deficit.....					
Total.....	22,609.73	12,810.68	136,412.20	72,001.35	161,195.57
<b>LIABILITIES</b>					
Debenture balance.....	10,587.81	1,603.11	640.88	7,900.42	12,159.39
Accounts payable.....	237.16	254.54	901.66		
Bank overdraft.....					2,485.25
Other liabilities.....			1,451.50		1,910.00
Total liabilities.....	10,824.97	1,857.65	2,994.04	7,900.42	16,554.64
<b>RESERVES</b>					
For equity in H-E.P.C. systems...	3,699.82	4,294.94	32,733.02	19,803.88	38,814.94
For depreciation.....	1,483.53	2,186.99	21,388.62	8,871.81	26,554.55
Other reserves.....					536.57
Total reserves.....	5,183.35	6,481.93	54,121.64	28,675.69	65,906.06
<b>SURPLUS</b>					
Debentures paid.....	5,912.19	1,483.37	4,359.12	6,099.58	23,840.61
Local sinking fund.....					
Operating surplus.....	689.22	2,987.73	74,937.40	29,325.66	54,894.26
Total surplus.....	6,601.41	4,470.10	79,296.52	35,425.24	78,734.87
Total liabilities, reserves and surplus	22,609.73	12,810.68	136,412.20	72,001.35	161,195.57
Percentage of net debt to total assets	57.2	21.8	2.9	15.1	13.5

## "A"—Continued

## Hydro Municipalities as at December 31, 1931

Toronto 606,370	Toronto Twp. 8,100	Trafalgar Twp. Zone No. 1 3,694	Trafalgar Twp. Zone No. 2	Walkerville 11,219	Wallace- burg 4,268	Wards- ville 209	Water- down 917
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
4,113,550.23	6,366.13			147,335.98	37,746.29		200.00
14,637,010.01				154,921.02	9,467.85		
5,849,216.85	166,852.10	19,740.19	8,569.08	151,142.78	55,330.09	4,960.22	15,478.38
3,823,436.65							
3,305,281.26	42,288.90	9,189.54	1,824.92	90,321.36	34,819.62	1,695.49	4,831.50
2,864,576.17	28,656.68	4,714.92	1,163.24	69,168.93	19,407.13	1,253.12	5,447.07
471,221.53	3,717.44				10,738.99	519.36	583.81
				187,172.22			
2,372,988.05	3,088.13	1,728.84	323.16	40,715.70	4,736.09	488.73	528.79
3,601,994.48	619.65			18,335.05	20,941.07	193.94	
41,039,275.23	251,589.03	35,373.49	11,880.40	859,113.04	193,187.13	9,110.86	27,069.55
1,054,175.64	11,820.53	2,357.75	1,535.87	39,452.18	10,076.08		565.30
	10,000.00					1,000.00	
1,544,280.03	6,414.54	108.77	162.71	123,255.10	3,965.17	466.40	2,407.04
635,539.26				33,181.44	3,534.78	13.30	
5,452,409.67							
8,036,704.72	35,561.66			284,578.64	83,020.16	1,402.10	10,962.64
75,583.18	1,680.16			1,173.04			
57,837,967.73	317,065.92	37,840.01	13,578.98	1,340,753.44	293,783.32	11,992.66	41,004.53
57,837,967.73	317,065.92	37,840.01	13,578.98	1,340,753.44	293,783.32	11,992.66	41,004.53
26,931,783.36	70,901.11	14,423.80	9,461.15	167,511.34	49,891.53	4,695.71	494.23
1,438,619.62	4,363.20	1.48	193.75	85,049.11	5,033.07	415.05	971.96
						239.57	
	1,680.16			204,749.72	1,358.39		40.00
28,370,402.98	76,944.47	14,425.28	9,654.90	457,310.17	56,282.99	5,350.33	1,506.19
8,036,704.72	35,561.66			284,578.64	83,020.16	1,402.10	10,962.64
6,435,240.76	71,936.44	9,860.67	641.00	101,002.52	32,724.09	1,450.84	5,749.85
1,000,247.17				3,004.11	211.14		
15,472,192.65	107,498.10	9,860.67	641.00	388,585.27	115,955.39	2,852.94	16,712.49
5,758,216.64	33,098.89	5,002.61		131,747.66	21,645.05	2,866.69	7,505.77
5,452,409.67							
2,784,745.79	99,524.46	8,551.45	3,283.08	363,110.34	99,899.89	922.70	15,280.08
13,995,372.10	132,623.35	13,554.06	3,283.08	494,858.00	121,544.94	3,789.39	22,785.85
57,837,967.73	317,065.92	37,840.01	13,578.98	1,340,753.44	293,783.32	11,992.66	41,004.53
51.7	27.3	38.1	71.1	31.1	26.7	50.5	5.0

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM					
Municipality.....	Waterford	Waterloo	Watford	Welland	Wellesley
Population.....	1,091	8,389	977	10,141	P.V.
ASSETS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....		14,454.37		73,059.45	
Substation equipment.....		63,511.42		56,576.25	
Distribution system—overhead...	15,271.42	85,237.69	15,573.77	129,368.88	5,553.38
Distribution system—underground				7,353.89	
Line transformers.....	6,521.87	39,603.01	5,286.79	56,799.16	2,153.50
Meters.....	5,859.59	34,307.58	5,156.27	54,424.68	2,321.20
Street light equipment, regular...	3,163.06	17,155.34	807.31	4,236.59	545.11
Street light equipment, ornamental				27,252.86	
Miscellaneous construction expense	442.53	7,797.80	2,174.41	11,670.86	102.05
Steam or hydraulic plant.....					
Old plant.....		24,160.67	657.44	51,256.28	
Total plant.....	31,258.47	286,227.88	29,655.99	471,998.90	10,675.24
Bank and cash balance.....	614.04		1,401.69	2,640.94	2,756.27
Securities and investments.....	8,000.00		4,000.00	4,487.73	
Accounts receivable.....	815.75	15,008.25	1,276.59	13,847.62	228.19
Inventories.....	4.75	1,234.22	26.93	17,259.96	
Sinking fund on local debentures..		6,336.00		90,925.27	
Equity in H-E.P.C. systems.....	13,745.91	115,048.97	9,067.10	126,873.82	8,224.74
Other assets.....				3,736.32	
Total assets.....	54,438.92	423,855.32	45,428.30	731,770.56	21,884.44
Deficit.....					
Total.....	54,438.92	423,855.32	45,428.30	731,770.56	21,884.44
LIABILITIES					
Debenture balance.....		61,444.81	2,933.08	244,677.35	2,754.40
Accounts payable.....	950.66	6,434.28		30,190.43	1,085.36
Bank overdraft.....		9,949.14			
Other liabilities.....				33,612.86	
Total liabilities.....	950.66	77,828.23	2,933.08	308,480.64	3,839.76
RESERVES					
For equity in H-E.P.C. systems...	13,745.91	115,048.97	9,067.10	126,873.82	8,224.74
For depreciation.....	8,198.46	80,454.73	4,325.24	97,855.41	1,923.80
Other reserves.....		3,106.80		950.00	
Total reserves.....	21,944.37	198,610.50	13,392.34	225,679.23	10,148.54
SURPLUS					
Debentures paid.....	7,745.53	44,555.19	6,780.13	30,322.65	4,745.60
Local sinking fund.....		6,336.00		90,925.27	
Operating surplus.....	23,798.36	96,525.40	22,322.75	76,362.77	3,150.54
Total surplus.....	31,543.89	147,416.59	29,102.88	197,610.69	7,896.14
Total liabilities, reserves and surplus	54,438.92	423,855.32	45,428.30	731,770.56	21,884.44
Percentage of net debt to total assets	2.3	23.6	8.1	39.1	28.1



## "A"—Continued

## Hydro Municipalities as at December 31, 1931

West Lorne 741	Weston 4,606	Wheatley 748	Windsor 70,031	Wood- bridge 737	Wood- stock 10,898	Wyoming 473	York Twp. 60,207
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
11,770.81	32,737.85		312,081.63		35,489.71		
11,386.93	59,000.12	14,271.69	677,140.19	16,104.19	89,309.81	7,089.33	745,547.27
			749,058.97		98,833.11		
4,138.99	35,332.30	4,275.64	136,703.62	5,754.28	53,830.36	1,257.61	
3,120.98	21,414.10	3,735.83	351,680.68	4,273.32	52,273.54	2,190.16	
615.97	30,057.76	1,519.76	332,916.82	423.26	15,068.12	283.92	48,894.34
			37,202.00				
347.14	6,008.95	933.67	693,788.56	838.20	2,770.47	805.20	19,070.96
1,250.00	1,912.03	2,569.50	135,908.28				
			141,990.11				
20,860.01	198,233.92	27,306.09	3,568,470.86	27,393.25	347,575.12	11,626.22	813,512.57
1,578.87		3,012.97	25,275.00	150.14	46,918.62		133,871.85
			38,835.98		61,000.00		
747.37	11,820.43		161,347.37	526.90	9,922.45	117.24	207.88
	288.20		82,478.93		714.38		
			167,644.47		44,990.44		
14,672.33	102,006.43	4,560.55	843,083.61	12,839.64	166,524.54	3,538.44	
	1,679.44		6,618.54				27,334.49
37,858.58	314,028.42	34,879.61	4,893,754.76	40,909.93	677,645.55	15,281.90	974,926.79
						1,915.78	
37,858.58	314,028.42	34,879.61	4,893,754.76	40,909.93	677,645.55	17,197.68	974,926.79
5,644.86	44,290.34	9,375.49	1,491,482.07	5,608.40	78,708.99	3,096.66	454,202.77
964.98	75.00	232.53	64,083.33	3,660.87			
	868.72		48,538.78			233.10	
	1,679.44		744,443.99	164.43	5,004.20		
6,609.84	46,913.50	9,608.02	2,348,548.17	9,433.70	83,713.19	3,329.76	454,202.77
14,672.33	102,006.43	4,560.55	843,083.61	12,839.64	166,524.54	3,538.44	
4,618.14	22,987.16	1,873.27	307,084.79	5,935.60	109,240.39	3,726.14	108,474.03
			45,492.03		13,509.88		
19,290.47	124,993.59	6,433.82	1,195,660.43	18,775.24	289,274.81	7,264.58	108,474.03
2,355.14	25,742.10	3,624.51	498,517.96	2,891.57	48,676.64	6,603.34	145,797.23
9,603.13	116,379.23	15,213.26	167,644.47	9,809.42	44,990.44		266,452.76
			683,383.73		210,990.47		
11,958.27	142,121.33	18,837.77	1,349,546.16	12,700.99	304,657.55	6,603.34	412,249.99
37,858.58	314,028.42	34,879.61	4,893,754.76	40,909.93	677,645.55	17,197.68	974,926.79
28.5	22.1	31.7	46.6	33.6	8.3	28.4	46.6

# STATEMENT

## Balance Sheets of Electrical Departments of

### NIAGARA SYSTEM—Concluded

### GEORGIAN BAY SYSTEM

Municipality.....	Zurich	SUMMARY NIAGARA SYSTEM	Alliston	Arthur	Barrie
Population.....	P.V.		1,364	954	7,166
<b>ASSETS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Lands and buildings.....		7,200,399.54			14,236.91
Substation equipment.....		19,710,862.92	675.73		15,152.50
Distribution system, overhead...	6,912.47	16,090,737.16	23,512.13	16,890.46	55,296.82
Distribution system, underground		4,968,417.13			66,437.67
Line transformers.....	1,643.52	7,439,795.70	5,967.52	4,161.78	41,322.61
Meters.....	2,223.26	6,656,770.88	6,901.93	3,297.97	38,016.31
Street light equipment, regular...	471.82	1,641,683.24	1,453.49	767.21	12,054.19
Street light equipment, ornamental		1,425,750.51			
Miscellaneous construction expense	240.77	3,457,956.31	2,675.19	326.99	6,822.64
Steam or hydraulic plant.....		13,175.95			
Old plant.....	150.00	6,478,817.98	7,846.49	1,086.62	42,634.32
Total plant.....	11,641.84	75,084,367.32	49,032.48	26,531.03	291,973.97
Bank and cash balance.....	324.47	2,275,060.87	9,780.77		50.00
Securities and investments.....	2,000.00	570,347.86			
Accounts receivable.....	363.32	3,343,871.89	792.55	48.35	14,158.93
Inventories.....		1,139,120.58			525.87
Sinking fund on local debentures...		7,382,481.41			
Equity in H-E.P.C. systems.....	6,127.15	18,128,680.11	8,470.85	8,504.07	54,684.26
Other assets.....		163,738.73			
Total assets.....	20,456.78	108,087,668.77	68,076.65	35,083.45	361,393.03
Deficit.....		12,353.08		8,085.94	
Total.....	20,456.78	108,100,021.85	68,076.65	43,169.39	361,393.03
<b>LIABILITIES</b>					
Debenture balance.....	4,083.03	40,152,865.85	28,679.65	19,043.99	11,059.09
Accounts payable.....		4,670,391.15	2,451.78	2.30	41,991.02
Bank overdraft.....		213,942.54		161.27	17,892.84
Other liabilities.....		1,862,177.20			
Total liabilities.....	4,083.03	46,899,376.74	31,131.43	19,207.56	70,942.95
<b>RESERVES</b>					
For equity in H-E.P.C. systems..	6,127.15	18,128,680.11	8,470.85	8,504.07	54,684.26
For depreciation.....	3,341.04	11,504,265.00	12,639.68	9,501.75	47,725.03
Other reserves.....		1,404,125.04			689.86
Total reserves.....	9,468.19	31,037,070.15	21,110.53	18,005.82	103,099.15
<b>SURPLUS</b>					
Debentures paid.....	1,508.58	10,992,385.64	11,320.35	5,956.01	75,940.91
Local sinking fund.....		7,382,481.41			
Operating surplus.....	5,396.98	11,788,707.91	4,514.34		111,410.02
Total surplus.....	6,905.56	30,163,574.96	15,834.69	5,956.01	187,350.93
Total liabilities, reserves and surplus	20,456.78	108,100,021.85	68,076.65	43,169.39	361,393.03
Percentage of net debt to total assets	28.5	46.9	52.2	72.3	23.1

## "A"—Continued

## Hydro Municipalities as at December 31, 1931

Beaverton 988	Beeton 561	Bradford 933	Brechin P.V.	Canning- ton 849	Chats- worth 251	Chesley 1,702	Coldwater 563
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
299.50					221.00		275.00
	428.50	388.50				595.98	
22,814.99	11,616.83	18,807.42	1,789.59	9,412.57	4,448.76	19,777.30	7,478.22
8,597.24	2,188.63	4,034.14	1,126.71	4,085.13	1,014.91	6,361.58	2,779.67
6,420.04	1,767.20	3,601.85	622.33	4,114.34	1,221.13	6,580.53	2,825.62
1,348.23	1,169.54	544.95	212.44	751.25	529.17	1,173.68	399.16
2,445.56	1,418.44	1,828.94	546.92	587.33	385.90	3,352.82	145.03
3,772.42				3,609.37		5,503.60	
45,697.98	18,589.14	29,205.80	4,297.99	22,559.99	7,820.87	43,345.49	13,902.70
2,656.88	1,026.27	2,405.56	1,491.25	2,327.66	2,879.22	15.00	1,186.40
4,000.00		2,000.00		2,326.62		10,000.00	6,000.00
566.23	292.50		243.10	92.22	225.97	2,944.31	685.31
	6.91	860.15		179.67	7.48	183.47	
					2,753.95		
10,046.41	6,788.11	7,573.67	3,991.90	7,411.17	1,766.28	14,455.87	5,434.63
62,967.50	26,702.93	42,045.18	10,024.24	34,897.33	15,453.77	70,944.14	27,209.04
	453.89						
62,967.50	27,156.82	42,045.18	10,024.24	34,897.33	15,453.77	70,944.14	27,209.04
7,765.69	11,000.91	19,806.42	2,344.86	9,151.76	4,757.87	8,795.96	4,150.90
1,990.63	3.00	999.69	723.43	705.03		3,116.06	1,404.05
						22.25	
386.50							36.00
10,142.82	11,003.91	20,806.11	3,068.29	9,856.79	4,757.87	11,934.27	5,590.95
10,046.41	6,788.11	7,573.67	3,991.90	7,411.17	1,766.28	14,455.87	5,434.63
9,873.78	5,365.71	7,006.01	1,394.18	6,328.77	2,413.91	11,470.33	5,930.51
19,920.19	12,153.82	14,579.68	5,386.08	13,739.94	4,180.19	25,926.20	11,365.14
7,234.31	3,999.09	5,393.58	866.06	5,848.24	642.13	18,704.04	2,849.10
					2,753.95		
25,670.18		1,265.81	703.81	5,452.36	3,119.63	14,379.63	7,403.85
32,904.49	3,999.09	6,659.39	1,569.87	11,300.60	6,515.71	33,083.67	10,252.95
62,967.50	27,156.82	42,045.18	10,024.24	34,897.33	15,453.77	70,944.14	27,209.04
19.2	55.3	60.4	50.9	35.9	18.3	21.1	25.7



# STATEMENT

## Balance Sheets of Electrical Departments of

### GEORGIAN BAY SYSTEM—Continued

Municipality.....	Colling- wood 6,027	Cooks- town P.V.	Creemore 598	Dundalk 659	Durham 1,744
Population.....					
<b>ASSETS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Lands and buildings.....	15,950.08	60.00			56.59
Substation equipment.....	11,203.24	392.95			546.02
Distribution system—overhead...	47,331.05	9,065.60	7,286.01	7,457.14	19,323.45
Distribution system—underground					
Line transformers.....	16,184.08	2,010.72	3,171.36	3,204.77	6,846.31
Meters.....	21,950.71	1,686.25	2,808.56	2,336.79	6,351.64
Street light equipment, regular...	2,876.90	514.21	295.27	1,078.87	1,381.46
Street light equipment, ornamental					
Miscellaneous construction expense	6,779.98	1,520.03	279.27	462.38	1,513.57
Steam or hydraulic plant.....					
Old plant.....	473.20		3,585.24	380.94	2,091.39
Total plant.....	122,749.24	15,249.76	17,425.71	14,920.89	38,110.43
Bank and cash balance.....		1,687.52	559.97	754.61	919.88
Securities and investments.....	27,000.00		4,000.00	4,000.00	18,000.00
Accounts receivable.....	7,136.84	548.34	389.32	28.22	833.34
Inventories.....	599.57		17.62	23.70	29.65
Sinking fund on local debentures...					
Equity in H-E.P.C. systems.....	66,381.32	2,042.48	5,263.04	4,939.81	14,351.11
Other assets.....					
Total assets.....	223,866.97	19,528.10	27,655.66	24,667.23	72,244.41
Deficit.....		949.07			
Total.....	223,866.97	20,477.17	27,655.66	24,667.23	72,244.41
<b>LIABILITIES</b>					
Debenture balance.....	1,916.24	7,617.54	1,514.96	1,468.11	5,763.61
Accounts payable.....	6,016.00	24.51	5,167.42	633.22	4,438.10
Bank overdraft.....	3,070.92				
Other liabilities.....	1,756.59				
Total liabilities.....	12,759.75	7,642.05	6,682.38	2,101.33	10,201.71
<b>RESERVES</b>					
For equity in H-E.P.C. systems...	66,381.32	2,042.48	5,263.04	4,939.81	14,351.11
For depreciation.....	34,275.68	4,910.18	2,625.06	3,361.69	9,743.47
Other reserves.....					
Total reserves.....	100,657.00	6,952.66	7,888.10	8,301.50	24,094.58
<b>SURPLUS</b>					
Debentures paid.....	40,688.35	5,882.46	4,985.04	4,868.79	20,036.39
Local sinking fund.....					
Operating surplus.....	69,761.87		8,100.14	9,395.61	17,911.73
Total surplus.....	110,450.22	5,882.46	13,085.18	14,264.40	37,948.12
Total liabilities, reserves and surplus	223,866.97	20,477.17	27,655.66	24,667.23	72,244.41
Percentage of net debt to total assets	8.1	43.7	29.8	9.3	17.6

## "A"—Continued

## Hydro Municipalities as at December 31, 1931

Elmvale P.V.	Elmwood P.V.	Flesherton 448	Grand Valley 590	Graven- hurst 1,822	Hanover 2,920	Holstein P.V.	Huntsville 2,903
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
106.25			36.50	2,747.29	3,001.32		353.52
				6,372.35	9,271.19		647.30
10,180.57	4,803.32	5,389.47	10,351.24	21,600.93	48,493.19	2,102.68	13,574.18
3,638.32	803.88	1,802.52	2,106.13	6,871.77	16,563.09	555.22	5,810.07
3,133.22	930.06	1,940.13	2,503.90	8,343.84	15,626.52	514.82	8,532.11
447.17	302.28	579.10	503.83	3,904.71	2,326.30	168.69	2,262.52
510.13	1,093.62	914.48	205.70	2,008.93	6,575.52	205.93	702.20
			919.85	26,976.29	2,370.91		5,436.20
18,015.66	7,933.16	10,625.70	16,627.15	78,826.11	104,228.04	3,547.34	37,318.10
1,931.27	2,079.33	3,636.33	2,922.37	2,849.05	2,193.90	57.30	5,869.23
2,000.00			3,230.86	1,800.00	27,244.54		8,000.00
29.88	47.42	334.80	42.44	5,076.67	1,833.80	372.33	1,804.88
		31.71	36.92	666.56		54.81	1,445.26
	339.36			6,810.49			
7,351.15	1,499.85	2,809.55	5,128.94	8,321.62	36,844.73	1,634.80	23,842.16
29,327.96	11,899.12	17,438.09	27,988.68	104,350.50	172,345.01	5,666.58	78,279.63
						4,176.05	
29,327.96	11,899.12	17,438.09	27,988.68	104,350.50	172,345.01	9,842.63	78,279.63
3,782.39	3,445.50	4,233.02	4,039.77	15,180.57	44,254.02	641.97	3,727.58
785.50	239.49	770.01	1,289.25	211.32		4,480.78	2,957.32
				12.41			
						10.00	285.00
4,567.89	3,684.99	5,003.03	5,329.02	15,404.30	44,254.02	5,132.75	6,969.90
7,351.15	1,499.85	2,809.55	5,128.94	8,321.62	36,844.73	1,634.80	23,842.16
5,627.79	2,278.98	3,121.77	4,277.10	14,986.32	31,529.07	955.00	10,474.46
12,978.94	3,778.83	5,931.32	9,406.04	23,307.94	68,373.80	2,589.80	34,316.62
3,217.61	3,754.50	2,466.98	6,960.23	48,787.87	43,245.98	2,120.08	17,405.96
	339.36			6,810.49			
8,563.52	341.44	4,036.76	6,293.39	10,039.90	16,471.21		19,587.15
11,781.13	4,435.30	6,503.74	13,253.62	65,638.26	59,717.19	2,120.08	36,993.11
29,327.96	11,899.12	17,438.09	27,988.68	104,350.50	172,345.01	9,842.63	78,279.63
20.8	33.3	34.2	23.3	9.6	32.7	127.3	12.8

**STATEMENT**

**Balance Sheets of Electrical Departments of**

**GEORGIAN BAY  
SYSTEM—Continued**

Municipality.....	Kincardine	Kirkfield	Lucknow	Markdale	Meaford
Population.....	2,218	P.V.	1,115	812	2,708
<b>ASSETS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Lands and buildings.....	6,389.46				1,104.93
Substation equipment.....	2,794.20			780.80	2,398.85
Distribution system—overhead...	40,452.33	5,113.67	16,839.18	9,359.70	29,627.82
Distribution system—underground					
Line transformers.....	9,369.42	557.90	3,962.16	3,153.41	7,132.98
Meters.....	9,561.08	600.28	4,483.93	3,230.79	6,701.41
Street light equipment, regular...	5,067.87	379.00	1,310.17	1,120.86	3,217.61
Street light equipment, ornamental					
Miscellaneous construction expense	5,651.33	301.53	2,307.02	679.49	2,141.28
Steam or hydraulic plant.....					
Old plant.....				2,080.65	3,496.43
Total plant.....	79,285.69	6,952.38	28,902.46	20,405.70	55,821.31
Bank and cash balance.....	727.55	869.25	2,139.45	1,125.33	2,648.66
Securities and investments.....			2,000.00	4,500.00	16,506.69
Accounts receivable.....	2,755.00	125.64	1,438.61	447.68	777.68
Inventories.....	1,817.02			75.39	
Sinking fund on local debentures..					
Equity in H-E.P.C. systems.....	13,214.57	1,349.31	6,676.63	3,751.29	8,843.78
Other assets.....	267.73				722.59
Total assets.....	98,067.56	9,296.58	41,157.15	30,305.39	85,320.71
Deficit.....		721.59			
Total.....	98,067.56	10,018.17	41,157.15	30,305.39	85,320.71
<b>LIABILITIES</b>					
Debenture balance.....	37,263.70	3,558.14	12,675.23	6,078.06	35,832.33
Accounts payable.....	2,078.00	1,067.79	116.54	543.67	2,335.97
Bank overdraft.....					
Other liabilities.....				20.00	654.82
Total liabilities.....	39,341.70	4,625.93	12,791.77	6,641.73	38,823.12
<b>RESERVES</b>					
For equity in H-E.P.C. systems...	13,214.57	1,349.31	6,676.63	3,751.29	8,843.78
For depreciation.....	12,219.69	1,601.07	4,045.95	6,198.54	6,828.29
Other reserves.....					
Total reserves.....	25,434.26	2,950.38	10,722.58	9,949.83	15,672.07
<b>SURPLUS</b>					
Debentures paid.....	26,936.30	2,441.86	7,048.13	2,921.94	13,527.87
Local sinking fund.....					
Operating surplus.....	6,355.30		10,594.67	10,791.89	17,297.65
Total surplus.....	33,291.60	2,441.86	17,642.80	13,713.83	30,825.52
Total liabilities, reserves and surplus	98,067.56	10,018.17	41,157.15	30,305.39	85,320.71
Percentage of net debt to total assets	46.4	58.2	37.1	25.0	50.8



## "A"—Continued

## Hydro Municipalities as at December 31, 1931

Midland 7,116	Mount Forest 1,888	Neustadt 460	Orange- ville 2,772	Owen Sound 12,778	Paisley 716	Penetang- uishene 3,767	Port Elgin 1,203
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
19,036.05	3,725.00		2,585.07	25,978.31		2,151.00	
85,096.20	686.75		1,169.00	12,919.97	1,933.26	7,076.39	
92,442.10	22,353.08	9,965.81	31,117.60	103,056.15	11,445.12	41,101.11	25,054.17
21,714.69	6,511.99	3,864.69	6,036.58	46,363.02	1,602.53	15,059.02	4,759.88
35,522.17	7,023.81	2,017.85	10,597.37	54,467.64	2,867.77	13,226.02	5,349.71
18,514.34	2,302.55	496.41	7,351.14	27,506.49	1,045.51	3,484.13	1,982.84
6,716.32	2,171.40	1,521.48	6,051.09	4,799.89	742.60	1,852.60	258.47
14,315.62	3,810.95	1,097.60	3,204.99	33,282.00			
					1,745.00	4,017.05	4,352.00
293,357.49	48,585.53	18,963.84	68,112.84	308,373.47	21,381.79	87,967.32	41,757.07
2,145.08	2,603.15	17.40	4,733.98	22,523.13	339.00	2,670.23	5,974.13
29,000.00	8,000.00			9,893.33	2,500.00	1,402.94	
18,034.89	116.35	35.47	1,195.27	5,233.39	1,070.97	1,378.65	259.27
4,350.61	65.80		165.85	2,778.08		646.66	54.07
100,398.65	12,725.37	4,457.46	15,643.23	18,318.97			
			762.43	75,492.46	3,771.93	29,708.19	420.11
				6,447.24			
447,286.72	72,096.20	23,474.17	90,613.60	449,060.07	29,063.69	123,773.99	48,464.65
		12,874.37					
447,286.72	72,096.20	36,348.54	90,613.60	449,060.07	29,063.69	123,773.99	48,464.65
40,089.16	12,960.21	8,665.60	12,511.08	20,000.00	11,539.09	19,130.68	42,000.00
22,473.57	2,107.43	9,427.73	24.76	25,569.94	625.52	4,480.04	3,210.94
600.67			500.00	2,233.26			
63,163.40	15,067.64	18,093.33	13,035.84	47,803.20	12,164.61	23,610.72	45,210.94
100,398.65	12,725.37	4,457.46	15,643.23	75,492.46	3,771.93	29,708.19	420.11
93,441.15	11,972.34	5,463.35	16,367.18	45,862.13	2,714.85	26,498.90	619.00
			762.43				
193,839.80	24,697.71	9,920.81	32,772.84	121,354.59	6,486.78	56,207.09	1,039.11
71,980.83	17,998.39	8,334.40	23,388.92	121,000.00	4,460.91	21,869.32	
118,302.69	14,332.46		21,416.00	18,318.97			
				140,583.31	5,951.39	22,086.86	2,214.60
190,283.52	32,330.85	8,334.40	44,804.92	279,902.28	10,412.30	43,956.18	2,214.60
447,286.72	72,096.20	36,348.54	90,613.60	449,060.07	29,063.69	123,773.99	48,464.65
18.2	25.4	95.1	17.4	8.3	48.1	25.1	94.1

# STATEMENT

## Balance Sheets of Electrical Departments of

### GEORGIAN BAY SYSTEM—Continued

Municipality.....	Port McNicol 825	Port Perry 1,288	Priceville P.V.	Ripley 410	Rosseau 230
Population.....					
ASSETS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....	202.60		68.00		
Substation equipment.....		2,564.65			
Distribution system—overhead....	7,269.85	18,751.48	4,641.50	9,292.68	6,965.75
Distribution system—underground					
Line transformers.....	1,248.32	4,471.61	549.70	2,885.36	2,026.21
Meters.....	2,245.28	3,984.01	362.85	1,291.88	871.71
Street light equipment, regular....	225.81	1,037.90	139.88	844.33	390.03
Street light equipment, ornamental					
Miscellaneous construction expense	634.10	397.67	833.90	1,164.99	502.13
Steam or hydraulic plant.....					
Old plant.....					
Total plant.....	11,825.96	31,207.32	6,595.83	15,479.24	10,755.83
Bank and cash balance.....	651.12		155.44	1,826.93	27.14
Securities and investments.....		11,946.66		1,500.00	
Accounts receivable.....	771.43	359.61	179.04	258.29	16.89
Inventories.....	35.92			60.60	
Sinking fund on local debentures..					
Equity in H-E.P.C. systems.....	2,526.85	5,610.51	602.49	2,905.55	132.39
Other assets.....					
Total assets.....	15,811.28	49,124.10	7,532.80	22,030.61	10,932.25
Deficit.....			5,551.43		96.49
Total.....	15,811.28	49,124.10	13,084.23	22,030.61	11,028.74
LIABILITIES					
Debenture balance.....	3,011.20	16,413.99	3,558.15	11,131.32	
Accounts payable.....	866.44	19.68	4,166.84	996.09	10,832.16
Bank overdraft.....		1,379.79			
Other liabilities.....		96.00		10.00	64.19
Total liabilities.....	3,877.64	17,909.46	7,724.99	12,137.41	10,896.35
RESERVES					
For equity in H-E.P.C. systems....	2,526.85	5,610.51	602.49	2,905.55	132.39
For depreciation.....	3,605.34	4,521.06	1,314.90	2,810.18	
Other reserves.....					
Total reserves.....	6,132.19	10,131.57	1,917.39	5,715.73	132.39
SURPLUS					
Debentures paid.....	4,288.80	3,467.67	3,441.85	2,840.62	
Local sinking fund.....					
Operating surplus.....	1,512.65	17,615.40		1,336.85	
Total surplus.....	5,801.45	21,083.07	3,441.85	4,177.47	
Total liabilities, reserves and surplus	15,811.28	49,124.10	13,084.23	22,030.61	11,028.74
Percentage of net debt to total assets	29.2	41.2	111.5	63.5	100.9

## "A"—Continued

## Hydro Municipalities as at December 31, 1931

Shelburne 1,138	Southamp- ton 1,700	Stayner 949	Sunderland P.V.	Tara 455	Teeswater 835	Thornton P.V.	Tottenham 538
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
800.00		200.00			330.31		358.50
566.60							
14,670.22	15,060.76	11,515.62	4,158.87	10,888.21	16,097.70	6,403.82	8,002.00
5,495.20	5,181.00	5,036.75	1,365.63	1,882.89	4,495.18	860.41	1,117.48
6,242.60	6,780.80	4,864.31	1,918.77	1,680.61	3,166.18	783.86	1,880.62
1,059.60	1,517.46	884.35	398.57	430.59	1,395.76	381.95	460.17
2,293.26	869.04	321.33	154.72	1,243.96	1,886.29	300.35	1,265.68
739.50	2,604.00	4,132.41	2,030.00		4,976.86		286.45
31,866.98	32,013.06	26,954.77	10,026.56	16,126.26	32,348.28	8,730.39	13,370.90
1,786.24	4,954.54	89.83	645.27	922.09	125.05	42.18	930.40
5,000.00		7,000.00	1,000.00		4,000.00		
115.02	669.92	727.17	112.60	837.19	260.32	215.00	377.40
				37.20			
7,899.82	549.50	6,733.95	5,175.44	3,742.57	4,979.46	1,420.55	4,296.54
46,668.06	38,187.02	41,505.72	16,959.87	21,665.31	41,713.11	10,408.12	18,975.24
				2,897.73		5,048.96	2,237.37
46,668.06	38,187.02	41,505.72	16,959.87	24,563.04	41,713.11	15,457.08	21,212.61
6,886.19	32,002.00	3,275.25	3,626.90	7,334.09	14,353.51	4,215.30	8,378.02
1,102.65		98.77	316.12	353.83	2,276.57	3,366.68	2.50
							76.00
7,988.84	32,002.00	3,374.02	3,943.02	7,687.92	16,630.08	7,581.98	8,456.52
7,899.82	549.50	6,733.95	5,175.44	3,742.57	4,979.46	1,420.55	4,296.54
8,473.43	523.00	7,589.42	2,647.45	4,966.64	3,684.10	3,169.85	3,870.47
16,373.25	1,072.50	14,323.37	7,822.89	8,709.21	8,663.56	4,590.40	8,167.01
13,033.81	998.00	10,724.75	3,173.10	8,165.91	13,646.49	3,284.70	4,589.08
9,272.16	4,114.52	13,083.58	2,020.86		2,772.98		
22,305.97	5,112.52	23,808.33	5,193.96	8,165.91	16,419.47	3,284.70	4,589.08
46,668.06	38,187.02	41,505.72	16,959.87	24,563.04	41,713.11	15,457.08	21,212.61
20.6	85.0	9.7	33.5	42.9	45.3	84.4	57.6



# STATEMENT

## Balance Sheets of Electrical Departments of

### GEORGIAN BAY SYSTEM—Continued

Municipality.....	Uxbridge	Victoria Harbor	Walkerton	Waubau- shene P.V.	Warton
Population.....	1,482	950	2,280		1,880
<b>ASSETS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Lands and buildings.....	40.00				
Substation equipment.....	2,657.65				
Distribution system—overhead...	13,028.84	7,734.94	36,845.41	5,315.57	21,247.36
Distribution system—underground					
Line transformers.....	3,643.96	1,087.90	9,185.69	1,106.31	5,014.83
Meters.....	4,239.78	2,231.91	9,812.44	1,526.80	5,615.34
Street light equipment, regular...	1,214.74	337.47	2,276.74	221.79	1,950.58
Street light equipment, ornamental					
Miscellaneous construction expense	843.50	667.12	2,192.15	327.66	1,574.89
Steam or hydraulic plant.....					
Old plant.....			5,238.00		3,981.00
Total plant.....	25,668.47	12,059.34	65,550.43	8,498.13	39,384.00
Bank and cash balance.....	771.11	1,873.52	8,369.53	2,705.60	2,902.99
Securities and investments.....	8,000.00				
Accounts receivable.....	769.43	62.56	411.47	184.36	2,121.85
Inventories.....			546.82		
Sinking fund on local debentures...					
Equity in H-E.P.C. systems.....	4,897.48	2,883.39	1,019.52	1,630.42	479.50
Other assets.....					
Total assets.....	40,106.49	16,878.81	75,897.77	13,018.51	44,888.34
Deficit.....					
Total.....	40,106.49	16,878.81	75,897.77	13,018.51	44,888.34
<b>LIABILITIES</b>					
Debenture balance.....	13,752.28	1,906.53	63,000.00	1,057.32	
Accounts payable.....	35.60	521.33	9,019.38	568.87	41,341.06
Bank overdraft.....					
Other liabilities.....					
Total liabilities.....	13,787.88	2,427.86	72,019.38	1,626.19	41,341.06
<b>RESERVES</b>					
For equity in H-E.P.C. systems...	4,897.48	2,883.39	1,019.52	1,630.42	479.50
For depreciation.....	3,385.52	3,218.69	1,066.00	2,024.49	451.04
Other reserves.....					
Total reserves.....	8,283.00	6,102.08	2,085.52	3,654.91	930.54
<b>SURPLUS</b>					
Debentures paid.....	2,455.31	4,593.47		2,442.68	
Local sinking fund.....					
Operating surplus.....	15,580.30	3,755.40	1,792.87	5,294.73	2,616.74
Total surplus.....	18,035.61	8,348.87	1,792.87	7,737.41	2,616.74
Total liabilities, reserves and surplus	40,106.49	16,878.81	75,897.77	13,018.51	44,888.34
Percentage of net debt to total assets	39.2	17.3	96.2	14.3	93.1

## "A"—Continued

## Hydro Municipalities as at December 31, 1931

GEORGIAN BAY SYSTEM—Concluded				EASTERN ONTARIO SYSTEM			
Winder- mere 124	Wingham 2,229	Woodville 403	GEORGIAN BAY SYSTEM SUMMARY	Alexandria 2,370	Apple Hill P.V.	Athens 614	Belleville 13,443
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
8,423.66	4,699.84		107,848.04	202.00	169.06		1,147.78
8,360.43	39,178.39	2,909.80	171,907.23				2,343.65
			1,105,070.96	27,743.17	2,864.70	13,914.98	102,511.14
			66,437.67				
2,835.65	15,252.01	1,850.73	357,889.25	7,842.14	1,288.37	1,757.05	21,459.54
813.36	13,323.76	1,949.44	383,263.94	7,015.45	939.30	2,420.61	53,040.55
236.36	3,292.12	143.53	129,663.27	2,224.20	421.12	698.90	17,221.49
	5,115.34	251.91	101,341.99	5,656.43	210.33	1,011.61	7,394.56
	13,592.99		46,874.99				
	12,320.02	2,182.50	183,297.87	4,466.89	709.55		
12,245.80	115,198.13	9,287.91	2,653,595.21	55,150.28	6,602.43	19,803.15	205,118.71
194.15	30.00	723.94	127,523.18	4,603.75	104.32	2,005.92	20,428.81
	9,000.00	6,500.00	247,351.64	5,000.00			
375.77	4,825.81	37.85	85,085.60	1,619.73	108.03	334.70	14,303.98
	3,923.71		19,227.08				7,444.20
			28,222.77				
332.36	14,243.23	5,253.44	663,305.72	13,868.19	1,310.62	1,454.76	35,261.87
			8,199.99				
13,148.08	147,220.88	21,803.14	3,832,511.19	80,241.95	8,125.40	23,598.53	282,557.57
			43,092.89		490.39		
13,148.08	147,220.88	21,803.14	3,875,604.08	80,241.95	8,615.79	23,598.53	282,557.57
	42,759.52	3,319.87	726,427.10	24,653.55	3,939.38	12,727.99	64,000.00
11,540.04		329.38	242,215.80	2,008.94	182.65	2,298.04	
	1,597.14		24,136.62				
911.00	292.00		7,932.03	140.98			4,798.27
12,451.04	44,648.66	3,649.25	1,000,711.55	26,803.47	4,122.03	15,026.03	68,798.27
332.36	14,243.23	5,253.44	663,305.72	13,868.19	1,310.62	1,454.76	35,261.87
364.68	17,800.56	1,907.22	559,042.71	8,816.24	1,122.52	1,095.75	10,183.75
			1,452.29	325.25			749.84
697.04	32,043.79	7,160.66	1,223,800.72	23,009.68	2,433.14	2,550.51	46,195.46
	53,345.98	2,180.13	801,755.28	23,480.29	2,060.62	1,272.01	112,000.00
			28,222.77				
	17,182.45	8,813.10	821,113.76	6,948.51		4,749.98	55,563.84
	70,528.43	10,993.23	1,651,091.81	30,428.80	2,060.62	6,021.99	167,563.84
13,148.08	147,220.88	21,803.14	3,875,604.08	80,241.95	8,615.79	23,598.53	282,557.57
97.2	33.6	22.1	31.0	40.4	60.5	67.9	27.8

# STATEMENT

## Balance Sheets of Electrical Departments of

### EASTERN ONTARIO SYSTEM—Continued

Municipality.....	Bloomfield	Brighton	Brockville	Cardinal	Carleton Place
Population.....	637	1,343	9,432	1,249	4,278
<b>ASSETS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Lands and buildings.....			45,286.76		6,255.32
Substation equipment.....	410.00		261.80		2,471.63
Distribution system—overhead...	11,243.26	13,865.93	78,231.80	9,956.14	38,542.02
Distribution system—underground					
Line transformers.....	2,230.77	3,213.55	34,071.11	1,711.89	9,697.97
Meters.....	2,655.50	6,207.10	40,364.14	1,625.43	15,724.74
Street light equipment, regular...	908.20	821.98	20,228.24	331.51	6,469.07
Street light equipment, ornamental					
Miscellaneous construction expense	1,403.42	356.52	3,469.31	807.12	3,944.28
Steam or hydraulic plant.....			54,727.45		
Old plant.....			4,821.76	3,474.80	5,293.19
Total plant.....	18,851.15	24,465.08	281,462.37	17,906.89	88,398.22
Bank and cash balance.....	970.74	2,040.89	8,036.61	93.38	5,694.99
Securities and investments.....			135,000.00		11,000.00
Accounts receivable.....	277.37	2,177.97	11,638.03	242.92	8,027.97
Inventories.....		5,243.04	2,825.53		852.06
Sinking fund on local debentures..			65,728.07		
Equity in H-E.P.C. systems.....	1,686.29	2,032.82	70,981.87	529.27	30,458.75
Other assets.....					
Total assets.....	21,785.55	35,959.80	575,672.48	18,772.46	144,431.99
Deficit.....					
Total.....	21,785.55	35,959.80	575,672.48	18,772.46	144,431.99
<b>LIABILITIES</b>					
Debenture balance.....	7,986.94	24,223.74	83,120.22	14,546.36	48,324.55
Accounts payable.....	764.21	2,097.66	12,325.10	410.31	
Bank overdraft.....					
Other liabilities.....		81.00	14.25		625.00
Total liabilities.....	8,751.15	26,402.40	95,459.57	14,956.67	48,949.55
<b>RESERVES</b>					
For equity in H-E.P.C. systems...	1,686.29	2,032.82	70,981.87	529.27	30,458.75
For depreciation.....	3,015.96	1,105.00	57,564.48	358.00	7,704.44
Other reserves.....			2,000.00		
Total reserves.....	4,702.25	3,137.82	130,546.35	887.27	38,163.19
<b>SURPLUS</b>					
Debentures paid.....	3,213.06	776.26	143,537.32	453.64	17,675.45
Local sinking fund.....			65,728.07		
Operating surplus.....	5,119.09	5,643.32	140,401.17	2,474.88	39,643.80
Total surplus.....	8,332.15	6,419.58	349,666.56	2,928.52	57,319.25
Total liabilities, reserves and surplus	21,785.55	35,959.80	575,672.48	18,772.46	144,431.99
Percentage of net debt to total assets	43.6	77.8	6.8	82.	42.9



## “A”—Continued

## Hydro Municipalities as at December 31, 1931

Chester- ville 1,000	Deser- onto 1,331	Finch 365	Hastings 709	Havelock 1,142	Kempt- ville 1,227	Kingston 21,616
\$ c. 250.00	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
7,710.08	9,588.57	7,375.21	13,690.06	572.90 19,583.50	19,113.66	184,945.77 44,473.79 158,748.99 131,728.47 55,188.00 95,099.34 68,675.05
2,993.20	1,270.24	1,393.35	1,549.55	2,093.41	4,924.47	131,728.47
3,890.41	4,646.32	1,563.65	2,595.18	5,353.53	5,993.78	55,188.00
526.97	432.60	340.75	1,130.51	1,803.93	1,063.16	95,099.34
610.68	247.53	23.24	728.78	4,616.53	5,749.18	68,675.05
			1,744.98	2,420.45		48,035.66
						14,386.30
15,981.34	16,185.26	10,696.20	21,439.06	36,444.25	36,844.25	801,281.37
3,359.63	1,889.91	1,443.81	2,265.33	453.77	1,468.61	48,409.15
11,000.00				7,000.00	20,000.00	74,175.00
397.44	1,631.30	35.61	244.44		3,255.43	26,477.05
854.41	455.05				869.55	10,693.03
						103,866.40
14,334.56	643.06	1,232.02	151.82	3,834.64	7,343.80	1,000.00
45,927.38	20,804.58	13,407.64	24,100.65	47,732.66	69,781.64	1,065,902.00
45,927.38	20,804.58	13,407.64	24,100.65	47,732.66	69,781.64	1,065,902.00
2,421.82	14,573.05	6,167.55	20,698.81	19,888.28	19,665.40	204,938.50
643.79	846.18		1,239.51	45.51	1,305.72	
	187.64		878.63			173.50
3,065.61	15,606.87	6,167.55	22,816.95	19,933.79	20,971.12	205,112.00
14,334.56	643.06	1,232.02	151.82	3,834.64	7,343.80	
6,752.19	1,128.17	644.00	190.00	5,476.21	5,254.35	91,620.81 96,429.74
21,086.75	1,771.23	1,876.02	341.82	9,310.85	12,598.15	188,050.55
4,078.18	426.95	832.45	301.19	13,011.72	5,334.60	106,961.49 103,866.40 461,911.56
17,696.84	2,999.53	4,531.62	640.69	5,476.30	30,877.77	
21,775.02	3,426.48	5,364.07	941.88	18,488.02	36,212.37	672,739.45
45,927.38	20,804.58	13,407.64	24,100.65	47,732.66	69,781.64	1,065,902.00
9.7	77.4	50.7	95.3	45.4	33.6	10.5

## STATEMENT

## Balance Sheets of Electrical Departments of

EASTERN ONTARIO  
SYSTEM—Continued

Municipality.....	Lakefield	Lanark	Lancaster	Lindsay	Madoc
Population.....	1,428	592	560	7,161	1,019
<b>ASSETS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Lands and buildings.....	214.79			10,268.56	100.00
Substation equipment.....				3,176.56	
Distribution system—overhead...	21,257.04	5,943.56	6,358.10	68,092.76	6,654.95
Distribution system—underground					
Line transformers.....	5,127.28	898.05	962.35	19,041.88	2,157.50
Meters.....	7,108.61	1,624.29	1,435.88	30,271.83	4,526.06
Street light equipment, regular...	1,831.52	682.38	650.65	10,156.43	1,500.00
Street light equipment, ornamental					
Miscellaneous construction expense	3,484.54	321.60	1,068.55	2,013.81	109.25
Steam or hydraulic plant.....					
Old plant.....	3,445.25				
Total plant.....	42,469.03	9,469.88	10,475.53	143,021.83	15,047.76
Bank and cash balance.....	7,084.93	1,304.72	1,167.73	13,949.62	3,468.55
Securities and investments.....	10,775.36	1,982.05		45,000.00	
Accounts receivable.....	1,529.05	329.46	4.86	1,486.88	35.88
Inventories.....	30.22			616.62	
Sinking fund on local debentures..					
Equity in H-E.P.C. systems.....	2,828.71	2,324.04	3,316.20	21,842.26	1,244.51
Other assets.....				300.00	
Total assets.....	64,717.30	15,410.15	14,964.32	226,217.21	19,796.70
Deficit.....			6,902.21		
Total.....	64,717.30	15,410.15	21,866.53	226,217.21	19,796.70
<b>LIABILITIES</b>					
Debenture balance.....	27,537.07	4,336.59	4,679.38	117,605.85	1,836.85
Accounts payable.....	192.33		6,628.56		370.97
Bank overdraft.....					
Other liabilities.....	345.17			1,632.70	
Total liabilities.....	28,074.57	4,336.59	11,307.94	119,238.55	2,207.82
<b>RESERVES</b>					
For equity in H-E.P.C. systems...	2,828.71	2,324.04	3,316.20	21,842.26	1,244.51
For depreciation.....	8,155.40	1,396.10	1,951.35	11,274.60	573.15
Other reserves.....					
Total reserves.....	10,984.11	3,720.14	5,267.55	33,116.86	1,817.66
<b>SURPLUS</b>					
Debentures paid.....	5,962.93	3,224.88	5,291.04	12,394.15	12,163.15
Local sinking fund.....					
Operating surplus.....	19,695.69	4,128.54		61,467.65	3,608.07
Total surplus.....	25,658.62	7,353.42	5,291.04	73,861.80	15,771.22
Total liabilities, reserves and surplus	64,717.30	15,410.15	21,866.53	226,217.21	19,796.70
Percentage of net debt to total assets	45.4	33.2	97.1	58.3	11.9

## "A"—Continued

## Hydro Municipalities as at December 31, 1931

Marmora 1,013	Martintown P.V.	Maxville 742	Napanee 2,984	Norwood 756	Omemees 489	Oshawa 25,550
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
126.15	407.79					54,371.41
12,573.09	2,703.12	11,341.92	35,893.25	457.53 23,152.45	360.32 10,633.31	181,403.99
2,297.85	690.33	1,495.94	8,410.65	4,462.72	2,647.47	38,814.11
3,358.68	794.22	2,351.95	15,548.76	5,160.98	2,399.54	96,928.86
1,088.59	335.26	1,605.64	3,463.96	1,848.52	528.89	15,076.33
2,000.91	653.27	2,467.30	3,439.44	4,023.76	1,540.92	7,554.67
573.62			1,561.60	2,447.51		8,831.65
21,892.74	5,302.35	19,670.54	68,317.66	41,553.47	18,110.45	402,981.02
3,526.68	1,099.07		2,493.47	4,471.99	601.14	82,762.74
837.02	1,000.00			4,000.00		
148.05	392.87	1,170.75	13,024.97	211.33	92.39	61,095.63
			5,792.61			10,998.50
1,341.16	830.02	3,874.96	7,698.57	1,838.68		119,283.82
27,745.65	8,624.31	24,716.25	97,327.28	52,075.47	18,803.98	677,121.71
27,745.65	8,624.31	24,716.25	97,327.28	52,075.47	18,803.98	677,121.71
9,133.60	3,558.05	9,308.08	52,782.32	29,755.30	5,481.25	271,297.44
244.21	56.00		3,131.68	175.82		59,280.91
10.00	3.00	461.24 40.00	483.36	237.07		14,619.48
9,387.81	3,617.05	9,809.32	56,397.36	30,168.19	5,481.25	345,197.83
1,341.16	830.02	3,874.96	7,698.57	1,838.68		119,283.82
3,151.08	976.60	3,025.06	2,958.00	7,207.94	5,010.69	19,901.75
4,492.24	1,806.62	6,900.02	10,656.57	9,046.62	5,010.69	139,185.57
8,532.51	2,441.95	6,691.92	17,217.68	7,344.70	6,518.75	38,702.56
5,333.09	758.69	1,314.99	13,055.67	5,515.96	1,793.29	154,035.75
13,865.60	3,200.64	8,006.91	30,273.35	12,860.66	8,312.04	192,738.31
27,745.65	8,624.31	24,716.25	97,327.28	52,075.47	18,803.98	677,121.71
35.6	46.4	47.1	62.9	60.0	29.1	61.9



# STATEMENT

## Balance Sheets of Electrical Departments of

### EASTERN ONTARIO SYSTEM—Continued

Municipality.....	Ottawa	Perth	Peterboro'	Picton	Port Hope
Population.....	125,496	3,762	22,487	3,146	4,415
<b>ASSETS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Lands and buildings.....	271,354.05	6,600.50	75,202.75	1,405.07	.....
Substation equipment.....	564,858.70	3,492.82	95,834.98	2,004.66	.....
Distribution system—overhead...	675,768.96	43,025.77	182,173.25	37,971.28	46,934.81
Distribution system—underground	195,043.97	.....	.....	.....	.....
Line transformers.....	284,376.57	21,377.60	93,694.35	11,345.91	11,300.70
Meters.....	267,861.01	20,429.14	88,643.82	15,727.28	19,542.97
Street light equipment, regular...	84,377.85	3,939.32	53,037.00	4,131.66	2,598.32
Street light equipment, ornamental	30,992.40	.....	.....	.....	.....
Miscellaneous construction expense	33,567.35	5,345.56	55,381.39	2,811.36	740.95
Steam or hydraulic plant.....	.....	.....	.....	.....	.....
Old plant.....	.....	23,610.69	29,771.74	3,105.28	.....
Total plant.....	2,408,200.86	127,821.40	673,739.28	78,502.50	81,117.75
Bank and cash balance.....	1,675.52	18,635.46	1,994.16	50.00	1,998.98
Securities and investments.....	123,000.00	20,000.00	30,000.00	21,000.00	.....
Accounts receivable.....	82,472.95	7,969.74	34,283.65	4,413.81	1,584.73
Inventories.....	23,239.95	7,121.56	6,917.23	4,883.21	1,605.94
Sinking fund on local debentures..	567,830.78	.....	181,813.96	.....	.....
Equity in H-E.P.C. systems.....	23,115.16	25,212.54	76,277.22	12,578.55	9,981.65
Other assets.....	.....	.....	.....	.....	.....
Total assets.....	3,229,535.22	206,760.70	1,005,025.50	121,428.07	96,289.05
Deficit.....	.....	.....	.....	.....	.....
Total.....	3,229,535.22	206,760.70	1,005,025.50	121,428.07	96,289.05
<b>LIABILITIES</b>					
Debenture balance.....	936,488.81	59,062.25	527,920.00	.....	42,226.97
Accounts payable.....	66,104.94	.....	22,441.16	1,372.15	447.83
Bank overdraft.....	45,385.01	.....	.....	3,489.53	.....
Other liabilities.....	.....	1,559.13	.....	761.00	2,912.41
Total liabilities.....	1,047,978.76	60,621.38	550,361.16	5,622.68	45,587.21
<b>RESERVES</b>					
For equity in H-E.P.C. systems...	23,115.16	25,212.54	76,277.22	12,578.55	9,981.65
For depreciation.....	817,268.71	29,294.79	73,772.75	9,995.44	3,031.35
Other reserves.....	121,735.92	.....	7,140.20	1,540.58	.....
Total reserves.....	962,119.79	54,507.33	157,190.17	24,114.57	13,013.00
<b>SURPLUS</b>					
Debentures paid.....	43,511.19	49,337.75	.....	5,730.32	36,773.03
Local sinking fund.....	567,830.78	.....	181,813.96	.....	.....
Operating surplus.....	608,094.70	42,294.24	115,660.21	85,960.50	915.81
Total surplus.....	1,219,436.67	91,631.99	297,474.17	91,690.82	37,688.84
Total liabilities, reserves and surplus	3,229,535.22	206,760.70	1,005,025.50	121,428.07	96,289.05
Percentage of net debt to total assets	18.2	33.4	49.3	5.2	52.8

“A”—Continued

Hydro Municipalities as at December 31, 1931

Prescott	Richmond	Russell	Smiths Falls	Stirling	Tweed	Warkworth
2,940	367	P.V.	7,452	822	1,206	P.V.
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
2,761.54			19,928.85	8,410.00		
38,355.47	5,940.38	7,716.76	4,745.66	7,117.12	10,019.79	5,488.18
12,556.72	769.40	1,382.48	24,185.49	3,571.08	2,843.41	548.10
18,027.83	1,136.31	1,458.78	31,805.16	4,759.69	4,604.40	1,476.00
1,630.21	161.29	499.49	9,296.63	1,020.00	999.88	299.74
1,418.88	612.67	1,191.88	7,431.73	770.24	497.01	624.19
11,808.35			59,549.97			3,618.02
86,559.00	8,620.05	12,249.39	242,140.16	30,655.35	18,964.49	12,054.23
1,395.17	54.99	1,527.33	822.86	3,617.58	2,162.14	228.45
3,000.00			42,000.00	5,666.37		
1,934.81	132.34	475.57	6,459.32	1,239.34	582.49	2,991.65
			402.94	1,351.10	1,909.26	
19,492.45	387.52	2,166.89	40,591.43	1,553.43	839.41	895.96
112,381.43	9,194.90	16,419.18	332,416.71	44,083.17	24,457.79	16,170.29
112,381.43	9,194.90	16,419.18	332,416.71	44,083.17	24,457.79	16,170.29
	5,937.49	8,024.54	93,474.02		18,410.04	9,832.08
	495.00	480.77		87.55	301.96	
					275.00	
	6,432.49	8,505.31	93,474.02	87.55	18,987.00	9,832.08
19,492.45	387.52	2,166.89	40,591.43	1,553.43	839.41	895.96
26,670.77	486.00	1,095.70	51,749.67	8,950.55	1,098.13	821.17
46,163.22	873.52	3,262.59	92,341.10	10,503.98	1,937.54	1,717.13
23,979.34	562.51	1,975.46	104,150.98	10,000.00	589.96	1,167.92
42,238.87	1,326.38	2,675.82	42,450.61	23,491.64	2,943.29	3,453.16
66,218.21	1,888.89	4,651.28	146,601.59	33,491.64	3,533.25	4,621.08
112,381.43	9,194.90	16,419.18	332,416.71	44,083.17	24,457.79	16,170.29
0.0	73.0	59.7	32.	0.2	80.4	64.4

# STATEMENT

## Balance Sheets of Electrical Departments of

### EASTERN ONTARIO SYSTEM—Concluded

Municipality.....	Wellington	Whitby	Williams- burg P.V.	Win- chester 970	EASTERN ONTARIO SYSTEM SUMMARY
Population.....	900	5,463			
<b>ASSETS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Lands and buildings.....	200.00	6,394.26		299.85	696,302.26
Substation equipment.....	499.80	34,200.41			767,282.33
Distribution system—overhead...	14,579.64	44,584.54	2,109.03	9,527.84	2,135,090.34
Distribution system—underground					326,772.44
Line transformers.....	3,670.23	10,277.00	416.89	2,234.90	724,241.57
Meters.....	5,056.43	13,840.69	1,064.77	4,729.73	920,808.70
Street light equipment, regular...	991.02	4,291.51	152.11	719.87	330,211.75
Street light equipment, ornamental					30,992.40
Miscellaneous construction expense	784.78	5,851.71	4.00	471.83	230,448.73
Steam or hydraulic plant.....					54,727.45
Old plant.....	2,477.92	1,340.13		1,100.00	190,559.65
Total plant.....	28,259.82	120,780.25	3,746.80	19,084.02	6,407,437.62
Bank and cash balance.....	252.98	3,707.15	498.06	395.45	264,216.54
Securities and investments.....	5,000.00		2,500.00	8,000.00	586,935.80
Accounts receivable.....	341.48	3,754.67	110.62	802.72	299,843.98
Inventories.....		163.23		1,466.36	95,735.60
Sinking fund on local debentures..					919,239.21
Equity in H-E.P.C. systems.....	2,337.42	12,578.30	1,643.34	8,557.75	589,756.29
Other assets.....					1,300.00
Total assets.....	36,191.70	140,983.60	8,498.82	38,306.30	9,164,465.04
Deficit.....					7,392.60
Total.....	36,191.70	140,983.60	8,498.82	38,306.30	9,171,857.64
<b>LIABILITIES</b>					
Debenture balance.....	12,309.32	43,462.38	600.78	6,852.32	2,873,788.92
Accounts payable.....	20.35	40.82	368.16	807.25	187,216.04
Bank overdraft.....					49,335.78
Other liabilities.....		693.61			30,471.20
Total liabilities.....	12,329.67	44,196.81	968.94	7,659.57	3,140,811.94
<b>RESERVES</b>					
For equity in H-E.P.C. systems...	2,337.42	12,578.30	1,643.34	8,557.75	589,756.29
For depreciation.....	4,538.54	11,221.53	1,535.90	5,839.18	1,314,983.77
Other reserves.....					229,921.53
Total reserves.....	6,875.96	23,799.83	3,179.24	14,396.93	2,134,661.59
<b>SURPLUS</b>					
Debentures paid.....	4,690.68	33,150.12	2,149.22	3,797.68	883,467.61
Local sinking fund.....					919,239.21
Operating surplus.....	12,295.39	39,836.84	2,201.42	12,452.12	2,093,677.29
Total surplus.....	16,986.07	72,986.96	4,350.64	16,249.80	3,896,384.11
Total liabilities, reserves and surplus	36,191.70	140,983.60	8,498.82	38,306.30	9,171,857.64
Percentage of net debt to total assets	36.4	34.4	14.1	25.7	29.0



## "A"—Concluded

## Hydro Municipalities as at December 31, 1931

THUNDER BAY  
SYSTEM

Fort William 24,635	Nipigon P.V.	Port Arthur 20,092	THUNDER BAY SYSTEM SUMMARY	ALL SYSTEMS GRAND SUMMARY
\$ c. 48,927.62 123,537.06 148,214.35	\$ c. 215.03 12,599.11	\$ c. 353,971.99 240,367.20 426,643.84	\$ c. 403,114.64 363,904.26 587,457.30	\$ c. 8,407,664.48 21,013,956.74 19,918,355.76
60,725.40 57,513.01 29,717.39	2,497.84 1,867.81 606.24	64,725.31 85,978.54 73,731.29	127,948.55 145,359.36 104,054.92	5,361,627.24 8,649,875.07 8,106,202.88
6,215.58	77.03	31,092.41	37,385.02	2,205,613.18
293,762.46		343,595.66	343,595.66	1,456,742.91
768,612.87	17,863.06	1,620,106.24	2,406,582.17	3,827,132.05
42,283.76	1,863.41	27,371.91	71,519.08	458,374.05
26,453.00	628.17	595,211.12	595,211.12	7,146,437.96
144,258.68		202,090.14	229,171.31	86,551,982.32
158,980.96	888.07	22,447.75	22,447.75	2,738,319.67
260.00		260,848.77	405,107.45	1,999,846.42
1,140,849.27	21,242.71	561,664.61	721,533.64	3,957,972.78
1,140,849.27	21,242.71	1,380.56	1,640.56	1,276,531.01
415,500.00	7,718.16	418,100.00	841,318.16	8,735,050.84
32,729.76	898.18	248,855.20	282,483.14	20,103,275.76
9,405.70		25,160.60	25,160.60	13,748,049.68
457,635.46	8,616.34	692,115.80	1,158,367.60	1,693,129.83
158,980.96	888.07	561,664.61	721,533.64	52,199,267.83
52,380.87	2,061.00	315,316.33	369,758.20	20,103,275.76
3,711.35		53,919.62	57,630.97	13,748,049.68
215,073.18	2,949.07	930,900.56	1,148,922.81	1,693,129.83
252,150.00	2,281.84	218,000.00	472,431.84	35,544,455.27
144,258.68		260,848.77	405,107.45	13,150,040.37
71,731.95	7,395.46	1,189,255.97	1,268,383.38	8,735,050.84
468,140.63	9,677.30	1,668,104.74	2,145,922.67	15,971,882.34
1,140,849.27	21,242.71	3,291,121.10	4,453,213.08	37,856,973.55
37.4	42.3	17.5	22.6	125,600,696.65
				44.1

## STATEMENT

## Detailed Operating Reports of Electrical Departments of

NIAGARA  
SYSTEM

Municipality.....	Acton	Agincourt	Ailsa Craig 516	Alvinston	Amherst- burg 3,083
Population.....	1,951	P.V.		657	
EARNINGS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	10,177.68	4,702.56	2,572.77	4,546.57	20,297.83
Commercial light service.....	3,487.21	960.47	1,406.28	2,857.27	7,384.31
Commercial power service.....	16,500.61	1,876.73	2,821.91	560.75	6,314.37
Municipal power.....	659.76			345.40	
Street lighting.....	1,795.50	728.00	578.00	1,854.00	2,001.04
Merchandise.....					
Miscellaneous.....	90.53	50.46	224.52	90.72	434.92
Total earnings.....	32,711.29	8,318.22	7,603.48	10,254.71	36,432.47
EXPENSES					
Power purchased.....	24,347.44	5,210.91	5,818.42	7,285.20	23,075.71
Substation operation.....					
Substation maintenance.....					
Distribution system, operation and maintenance.....	2,100.92	167.10	264.11	28.81	2,719.70
Line transformer maintenance.....	23.59				14.10
Meter maintenance.....	126.01			15.55	325.81
Consumers' premises expenses.....					
Street lighting, operation and main- tenance.....	283.50	62.79	73.49	68.25	526.53
Promotion of business.....	195.35				
Billing and collecting.....			195.89	262.50	1,822.70
General office, salaries and expenses.....	1,080.02	367.22	78.02	253.62	671.21
Undistributed expenses.....	499.77		20.00	34.52	351.57
Truck operation and maintenance.....	363.51				410.61
Interest.....	96.35	310.77	34.89	850.21	1,588.98
Sinking fund and principal payments on debentures.....	589.19	499.42	241.82	941.90	1,172.44
Depreciation.....	1,283.00	331.00	474.00	549.00	1,670.00
Other reserves.....					
Total operating costs and fixed charges.....	30,988.65	6,949.21	7,200.64	10,289.56	34,349.36
Net surplus.....	1,722.64	1,369.01	402.84		2,083.11
Net loss.....				34.85	
NUMBER OF CONSUMERS					
Domestic service.....	480	138	126	154	645
Commercial light service.....	84	23	39	56	138
Power service.....	18	3	3	3	16
Total.....	582	164	168	213	799

"B"

Hydro Municipalities for Year Ended December 31, 1931

Ancaster Twp. 3,119	Arkona 383	Aylmer 1,996	Ayr 776	Baden P.V.	Beachville P.V.	Belle River 715	Blenheim 1,630
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
8,952 64	2,447 61	11,343.60	4,676 23	3,494.94	3,009.00	4,189.51	8,267.33
1,697 38	1,548.92	7,649.53	1,768.46	1,430.49	880.77	1,534.34	6,341.53
494.97	975.07	4,044.17	1,234.38	4,952.44	7,433.81	550.52	4,117.20
128.28		1,057.42				867.63	949.54
819.50	960.00	2,270.00	1,028.00	520.00	517.00	827.75	2,414.67
	80						
18.28	4.27	1,236.05	26.71	87.04	660.83	175.62	106.50
12,111.05	5,936.67	27,600.77	8,733.78	10,484.91	12,501.41	8,145.37	22,196.77
7,106.82	4,008.44	15,955.12	6,292.06	8,522.79	9,509.13	5,141.25	13,988.72
1,730.25	120.38	3,487.56	401.26	443.58	527.73	466.75	1,836.45
22.75		135.70	3.81		25.00	25.00	4.70
		26.15	50.27	46.55	124.49	50.38	286.41
107.35	63.18	115.94	144.37	262.69	95.87	47.22	187.16
	165.00	480.48	548.32	385.44	424.02	355.41	1,145.22
1,536.72	164.46	1,133.88	34.83	84.66	14.51	86.56	215.28
		135.95	20.00	23.44	33.07	10.37	211.58
538.62	837.28	1,357.56	398.57	135.09	156.68	393.80	581.25
259.08	506.02	1,150.36	317.48	190.17	202.51	347.45	424.36
758.00	292.00	1,330.00	507.00	348.00	558.00	563.00	1,221.00
12,059.59	6,156.76	25,308.70	8,717.97	10,442.41	11,671.01	7,487.19	20,102.13
51.46		2,292.07	15.81	42.50	830.40	658.18	2,094.64
	220.09						
262	98	601	193	130	128	180	486
39	40	134	45	33	28	51	126
5	3	12	4	3	4	4	12
306	141	747	242	166	160	235	624



## STATEMENT

## Detailed Operating Reports of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality.....	Blyth	Bolton	Bothwell	Brampton	Brantford
Population.....	621	609	575	5,137	30,103
EARNINGS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	3,688.22	2,829.29	2,731.71	35,786.15	166,278.09
Commercial light service.....	1,800.63	999.79	1,360.55	15,738.99	47,771.08
Commercial power service.....	779.15	2,367.12	715.58	13,939.51	100,562.01
Municipal power.....			163.33	2,305.67	27,309.16
Street lighting.....	1,300.00	1,003.75	1,293.00	5,191.35	33,996.43
Merchandise.....				90.85	
Miscellaneous.....	10.45	16.40	591.06	933.78	780.00
Total earnings.....	7,578.45	7,216.35	6,855.23	73,986.30	376,696.77
EXPENSES					
Power purchased.....	4,793.05	5,389.89	4,472.95	55,135.34	238,418.54
Substation operation.....				329.46	5,435.60
Substation Maintenance.....					1,131.40
Distribution system, operation and maintenance.....	395.08	297.30	694.19	1,538.75	12,763.05
Line transformer maintenance.....				97.47	1,418.90
Meter maintenance.....				622.61	600.34
Consumers' premises expenses.....					404.39
Street lighting, operation and maintenance.....	91.55	107.35	121.62	427.79	4,778.13
Promotion of business.....					167.06
Billing and collecting.....			178.74	1,518.65	8,151.61
General office, salaries and expenses.....	204.96	491.62	402.25	3,049.59	9,072.02
Undistributed expenses.....			24.50	415.47	6,476.16
Truck operation and maintenance.....				435.41	2,749.01
Interest.....	642.78	384.35	211.68	908.83	21,068.70
Sinking fund and principal payments on debentures.....	888.28	484.66	151.57	3,870.66	22,971.21
Depreciation.....	420.00	513.00	495.00	4,252.00	21,501.00
Other reserves.....					285.70
Total operating costs and fixed charges.....	7,435.70	7,668.17	6,752.50	72,602.03	357,392.82
Net surplus.....	142.75		102.73	1,384.27	19,303.95
Net loss.....		451.82			
NUMBER OF CONSUMERS					
Domestic service.....	160	151	161	1,357	6,515
Commercial light service.....	49	42	49	229	776
Power service.....	4	9	5	54	115
Total.....	213	202	215	1,640	7,406

## "B"—Continued

## Hydro Municipalities for Year Ended December 31, 1931

Brantford Twp. 7,595	Bridge- port P.V.	Brigden P.V.	Brussels 725	Burford P.V.	Burgess- ville P.V.	Caledonia 1,456	Campbell- ville P.V.
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
19,468.45	3,383.14	2,407.98	5,324.30	4,324.12	1,343.15	5,200.46	1,362.14
4,069.17	1,018.37	1,745.58	2,366.11	943.69	592.57	4,518.22	458.93
3,903.96	729.64	934.89	607.88	1,786.23	1,072.05	2,241.53	.....
4,244.00	570.00	1,162.63	1,272.00	804.00	312.00	1,607.91	456.00
874.79	.....	107.74	7.08	170.71	32.44	112.02	58.60
32,560.37	5,701.15	6,358.82	9,577.37	8,028.75	3,352.21	13,680.14	2,335.67
15,958.65	3,865.62	4,697.55	6,703.61	4,614.65	2,474.46	8,531.90	1,493.28
3,472.44	213.19	389.84	435.71	183.88	34.65	963.18	10.90
57.82	68.00	.....	.....	14.77	.....	1.60	.....
186.87	34.22	.....	.....	65.91	.....	25.10	.....
660.23	86.41	94.81	109.52	65.57	32.27	164.71	7.00
1,728.25	91.01	340.60	396.32	423.65	103.48	687.27	.....
1,431.85	321.86	234.01	.....	95.31	6.81	300.93	98.21
109.59	24.50	20.00	.....	25.08	15.00	58.66	.....
1,746.37	609.32	123.27	881.16	71.13	77.59	148.15	259.33
3,062.65	.....	242.75	876.12	330.08	228.02	214.02	228.90
2,364.00	458.00	324.00	513.00	432.00	180.00	698.00	109.00
30,778.72	5,772.13	6,466.83	9,915.44	6,322.03	3,152.28	11,793.52	2,206.62
1,781.65	.....	.....	.....	1,706.72	199.93	1,886.62	129.05
.....	70.98	108.01	338.07	.....	.....	.....	.....
765	105	110	207	186	55	305	40
44	19	39	62	33	21	87	8
5	4	4	2	4	3	8	..
814	128	153	271	223	79	400	48

## STATEMENT

## Detailed Operating Reports of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality.....	Cayuga	Chatham	Chippawa	Clifford	Clinton
Population.....	661	16,441	1,222	496	1,911
EARNINGS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	2,905.53	77,643.30	7,130.73	2,171.95	11,497.61
Commercial light service.....	2,558.62	71,246.60	1,679.08	1,483.26	5,844.46
Commercial power service.....	1,573.82	55,060.23	744.59	124.31	4,829.55
Municipal power.....		4,762.12	774.85		895.56
Street lighting.....	1,539.96	18,513.75	1,080.00	833.00	1,963.96
Merchandise.....		718.68			812.27
Miscellaneous.....		1,797.36		33.63	342.68
Total earnings.....	8,577.93	229,742.04	11,409.25	4,646.15	26,186.09
EXPENSES					
Power purchased.....	3,766.41	113,854.44	5,898.90	3,713.99	15,771.98
Substation operation.....		8,524.88			
Substation maintenance.....		2,968.52			69.17
Distribution system, operation and maintenance.....	489.90	6,786.62	874.88	19.74	254.38
Line transformer maintenance.....	1.82	2,238.78	22.00		26.94
Meter maintenance.....	81.37	5,845.59	109.44	8.90	173.27
Consumers' premises expenses.....		148.13			
Street lighting, operation and maintenance.....	50.33	7,950.42	346.96	22.19	189.94
Promotion of business.....	28.48				
Billing and collecting.....	620.78	8,863.00		320.29	728.80
General office, salaries and expenses.....	199.08	16,354.20	1,018.39	76.38	1,809.88
Undistributed expenses.....	50.91	4,640.14		33.21	356.01
Truck operation and maintenance.....		1,614.17			164.28
Interest.....	888.70	15,894.06	553.90	398.16	2,169.37
Sinking fund and principal payments on debentures.....	790.89	12,877.94	658.96	152.29	1,305.66
Depreciation.....	547.00	17,719.43	816.00	251.00	1,734.00
Other reserves.....	252.94				260.67
Total operating costs and fixed charges.....	7,768.61	226,280.32	10,299.43	4,996.15	25,014.35
Net surplus.....	809.32	3,461.72	1,109.82		1,171.74
Net loss.....				350.00	
NUMBER OF CONSUMERS					
Domestic service.....	106	3,785	293	100	512
Commercial light service.....	53	741	33	39	128
Power service.....	4	104	6	1	15
Total.....	163	4,630	332	140	655



“B”—Continued

Hydro Municipalities for Year Ended December 31, 1931

Comber	Cottam	Courtright	Dashwood	Delaware	Dorchester	Drayton	Dresden
P.V.	P.V.	370	P.V.	P.V.	P.V.	559	1,403
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
2,538.42	2,504.11	1,923.46	1,840.15	1,327.34	2,608.51	2,976.24	5,955.44
2,022.69	1,588.37	979.79	1,024.65	774.87	980.67	1,908.35	5,107.79
2,633.12	380.00	936.89	1,335.65	.....	435.67	1,098.45	5,229.98
732.00	445.00	774.00	492.00	252.00	640.56	750.00	458.88
91.08	6.55	5.81	38.25	142.66	96.71	279.58	150.11
8,017.31	4,924.03	4,619.95	4,730.70	2,496.87	4,762.12	7,012.62	18,769.24
6,080.13	2,720.11	2,622.57	3,308.40	1,340.82	2,682.27	5,548.00	12,563.08
281.74	128.52	77.73	141.12	61.46	222.73	326.97	1,099.59
.....	12.62	.....	.....	.....	21.03	62.00	.....
64.11	44.08	51.25	57.37	19.58	23.56	31.65	26.23
376.56	.....	.....	.....	.....	169.20	.....	31.51
221.60	428.99	180.01	82.75	142.33	10.83	180.45	746.59
50.64	.....	.....	.....	.....	15.71	20.00	740.83
166.04	433.37	313.70	134.82	128.77	149.26	433.85	89.36
426.09	319.77	528.12	99.28	131.44	134.52	256.31	157.38
412.00	313.00	200.00	186.00	145.00	307.00	465.00	1,182.38
.....	.....	.....	.....	.....	.....	.....	833.00
8,078.91	4,400.46	3,973.38	4,009.74	1,969.40	3,736.11	7,324.23	17,469.95
.....	523.57	646.57	720.96	527.47	1,026.01	.....	1,299.29
61.60	.....	.....	.....	.....	.....	311.61	.....
104	104	62	67	50	128	154	434
44	33	22	26	20	28	61	116
3	1	2	1	.....	1	5	14
151	138	86	94	70	157	220	564

STATEMENT  
Detailed Operating Reports of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality.....	Drumbo	Dublin	Dundas	Dunnville	Dutton
Population.....	P.V.	P.V.	5,137	3,412	801
EARNINGS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	2,021.92	1,246.49	19,784.23	12,099.05	3,354.37
Commercial light service.....	908.90	887.64	11,793.00	11,763.25	2,563.78
Commercial power service.....	865.77	500.72	20,242.26	12,518.80	3,266.15
Municipal power.....			1,116.14	2,527.70	
Street lighting.....	538.00	750.00	6,283.15	3,964.28	946.50
Merchandise.....			306.91	76.74	29.13
Miscellaneous.....	29.17		210.78		231.40
Total earnings.....	4,363.76	3,384.85	59,736.47	42,949.82	10,391.33
EXPENSES					
Power purchased.....	2,495.30	2,418.28	36,793.22	23,462.43	7,377.84
Substation operation.....			93.13		
Substation maintenance.....					
Distribution system, operation and maintenance.....	32.11	25.50	5,293.29	1,345.51	68.87
Line transformer maintenance.....			63.44	37.67	1.25
Meter maintenance.....	2.76		881.05	133.20	134.60
Consumers' premises expenses.....					
Street lighting, operation and maintenance.....	105.63	90.18	435.88	324.44	43.90
Promotion of business.....					
Billing and collecting.....	233.60	145.00	1,256.50		682.65
General office, salaries and expenses.....	38.71	36.84	1,844.43	2,531.22	359.59
Undistributed expenses.....	15.00	19.50	1,113.51	256.53	47.33
Truck operation and maintenance.....			632.78	208.51	
Interest.....	154.30	210.64	1,714.49	3,142.95	343.95
Sinking fund and principal payments on debentures.....	147.85	394.65	1,878.21	2,221.09	303.13
Depreciation.....	245.00	250.00	3,672.00	2,925.00	513.00
Other reserves.....					
Total operating costs and fixed charges.....	3,470.26	3,590.59	55,671.93	36,588.55	9,876.11
Net surplus.....	893.50		4,064.54	6,361.27	515.22
Net loss.....		205.74			
NUMBER OF CONSUMERS					
Domestic service.....	82	37	1,172	658	203
Commercial light service.....	24	23	186	188	71
Power service.....	2	3	39	32	7
Total.....	108	63	1,397	878	281

## "B"—Continued

## Hydro Municipalities for Year Ended December 31, 1931

East Windsor 16,203	East York Twp. 30,556	Elmira 2,940	Elora 1,306	Embro 443	Erieau 202	Erie Beach 23	Essex 1,880
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
77,126.15	166,304.83	16,552.29	7,421.51	2,808.82	3,343.46	1,454.99	8,291.80
23,618.38	20,851.31	6,046.20	3,658.17	1,767.87	1,060.49	197.18	5,817.00
46,059.43	37,671.31	5,075.09	7,980.93	1,446.67	895.54		5,200.91
	4,051.34	820.33					1,742.92
9,003.57	18,191.02	1,846.00	1,678.32	702.00	373.50		3,249.44
			314.18				
	577.67	901.98	256.91			1.65	383.26
155,807.53	247,647.48	31,241.89	21,310.02	6,725.36	5,672.99	1,653.82	24,685.33
90,483.10	145,616.32	23,846.77	14,028.57	3,530.20	3,720.25	969.81	12,240.75
3,952.21	9,883.36	2,188.07	2,626.33	240.78	187.99	120.47	561.64
1,135.47	942.13	166.40			18.35		59.53
4,340.10	2,409.46	55.91	62.92	53.96	58.53		112.19
1,248.75	1,023.46	161.64					
2,858.17	2,164.80	138.50	83.11	114.95	48.75		265.35
341.53	15.00	13.61					
10,798.51	10,280.27	974.44	639.64	338.92	281.59		264.58
3,267.74	11,321.33	1,016.60	363.54	38.93	34.28	172.26	2,929.28
4,145.39	3,203.71	464.25	463.28	23.52	15.00	10.00	358.52
	4,261.44	248.41	125.11				333.04
4,765.69	15,101.68	1,741.60	315.06	260.79	347.31	174.46	1,153.67
6,037.04	12,892.86	1,411.27	662.30	387.02	289.22	113.24	428.30
7,065.00	11,322.00	1,952.00	995.00	430.00	289.00	73.00	1,510.00
	228.87						
140,438.70	230,666.69	34,379.47	20,364.86	5,419.07	5,290.27	1,633.24	20,216.85
15,368.83	16,980.79		945.16	1,306.29	382.72	20.58	4,468.48
		3,137.58					
2,713	8,430	512	303	98	121	66	451
294	367	117	75	47	13	3	102
49	36	20	3	2	2		20
3,056	8,833	649	381	147	136	69	573



## STATEMENT

## Detailed Operating Reports of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality.....	Etobicoke*	Exeter	Fergus	Fonthill	Forest
Population.....	Twp. 15,050	1,606	2,465	833	1,405
EARNINGS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	78,556.69	11,496.96	14,116.96	5,121.68	10,568.40
Commercial light service.....	16,970.15	5,313.84	6,881.57	827.89	5,129.94
Commercial power service.....	14,112.81	4,968.98	11,192.95	539.52	4,303.95
Municipal power.....	1,476.10	543.55	558.98		950.24
Street lighting.....	12,672.81	1,899.09	2,629.68	1,050.00	2,321.00
Merchandise.....		407.53			
Miscellaneous.....	2,655.54	467.57		13.58	483.49
Total earnings.....	126,444.10	25,097.43	35,380.14	7,552.67	23,757.02
EXPENSES					
Power purchased.....	71,005.91	14,630.87	23,204.67	4,092.77	13,477.06
Substation operation.....					
Substation maintenance.....					
Distribution system, operation and maintenance.....	8,437.61	410.82	1,481.75	556.87	1,702.96
Line transformer maintenance.....	1,168.79	102.48	154.97		
Meter maintenance.....	1,257.54	177.18	238.43	77.85	343.32
Consumers' premises expenses.....					
Street lighting, operation and maintenance.....	1,345.30	283.41	201.03	33.31	326.15
Promotion of business.....	49.05	20.24	185.45		90.51
Billing and collecting.....	4,931.82	546.12	449.58		608.06
General office, salaries and expenses.....	3,905.57	2,808.21	933.55	494.37	1,698.28
Undistributed expenses.....	2,683.64	204.32	285.36		216.87
Truck operation and maintenance.....	2,207.16	364.70	400.50		351.29
Interest.....	12,914.50	547.87	1,574.55	1,079.62	752.97
Sinking fund and principal payments on debentures.....	10,057.37	871.18	2,519.53	919.27	949.51
Depreciation.....	9,662.00	1,283.00	1,371.00	446.00	1,394.00
Other reserves.....					
Total operating costs and fixed charges.....	129,626.26	22,250.40	33,000.37	7,700.06	21,910.98
Net surplus.....		2,847.03	2,379.77		1,846.04
Net loss.....	3,182.16			147.39	
NUMBER OF CONSUMERS					
Domestic service.....	2,908	443	608	199	453
Commercial light service.....	269	119	116	28	131
Power service.....	21	10	16	4	23
Total.....	3,198	572	740	231	607

\*1,164 consumers transferred to Long Branch.

## "B"—Continued

## Hydro Municipalities for Year Ended December 31, 1931

Galt 13,752	George- town 1,997	Glencoe 779	Goderich 4,113	Granton P.V.	Guelph 20,393	Hagers- ville 1,265	Hamilton 144,529
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
105,969.99	13,255.44	5,411.85	27,898.71	1,756.50	101,228.46	4,707.60	886,313.22
43,677.69	5,666.15	3,561.05	13,134.22	1,059.15	48,493.53	4,680.82	316,448.95
75,844.37	20,536.40	2,159.39	11,775.69	948.32	89,943.74	23,176.75	1,341,798.40
3,394.70	818.92	1,213.30	2,961.46	.....	19,569.54	.....	77,385.69
22,502.00	2,099.81	1,934.04	3,796.00	370.00	23,279.87	1,732.00	106,112.74
.....	.....	.....	95.46	.....	111.78	.....	.....
3,180.00	544.46	5.99	70.37	78.71	3,339.62	671.64	32,524.70
254,568.75	42,921.18	14,285.62	59,731.91	4,212.68	285,966.54	34,968.81	2,760,583.70
157,903.76	33,972.80	9,222.93	39,881.16	2,885.31	197,488.02	26,608.86	1,858,950.16
4,445.56	.....	.....	2,136.87	.....	.....	.....	54,281.66
295.89	.....	.....	.....	.....	4,042.29	.....	13,388.35
2,412.19	1,771.56	655.51	2,754.92	218.98	5,939.68	2,633.74	38,631.01
208.60	19.77	.....	622.98	.....	707.67	117.95	11,913.29
2,933.11	485.15	.....	27.28	.....	4,045.17	134.35	14,893.08
.....	.....	.....	.....	.....	.....	.....	10,865.04
2,949.86	109.35	200.08	321.37	112.27	6,989.06	262.08	12,326.17
1,625.03	.....	.....	.....	.....	2,188.42	.....	10,514.80
2,959.71	.....	593.73	489.99	136.00	6,013.42	829.22	43,321.97
4,351.19	2,970.15	532.00	2,822.40	41.80	6,992.91	424.88	50,926.64
6,035.83	489.53	59.12	620.62	15.00	4,784.21	179.83	39,464.08
387.10	499.13	68.90	271.81	.....	1,706.89	440.14	.....
20,250.15	771.77	624.45	2,898.54	148.20	4,179.61	211.78	211,754.56
17,931.26	681.21	881.79	2,020.50	106.07	4,169.29	339.02	236,547.32
21,554.00	1,856.00	836.00	4,731.00	207.00	12,590.00	998.00	133,723.72
.....	.....	.....	55.77	.....	.....	.....	.....
246,243.24	43,626.42	13,674.51	59,655.21	3,870.63	261,836.64	33,179.85	2,741,501.85
8,325.51	.....	611.11	76.70	342.05	24,129.90	1,788.96	19,081.85
.....	705.24	.....	.....	.....	.....	.....	.....
3,519	646	220	1,160	78	4,916	300	36,896
507	126	83	237	32	718	109	5,316
125	24	6	17	1	148	16	1,340
4,151	796	309	1,414	111	5,782	425	43,552

## STATEMENT

## Detailed Operating Reports of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality.....	Harriston	Harrow	Hensall	Hespeler	Highgate
Population.....	1,325	830	727	2,769	315
EARNINGS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	7,045.09	8,298.58	4,240.10	18,254.74	1,726.12
Commercial light service.....	4,341.34	4,563.08	2,016.11	5,787.18	1,156.92
Commercial power service.....	5,232.33	4,685.17	2,644.16	27,942.77	1,523.25
Municipal power.....	457.63			950.84	
Street lighting.....	1,199.00	877.93	925.00	2,775.00	559.16
Merchandise.....					
Miscellaneous.....	8.88	97.10	132.62	25.00	142.93
Total earnings.....	18,284.27	18,521.86	9,957.99	55,735.53	5,108.38
EXPENSES					
Power purchased.....	13,960.79	12,766.25	6,841.72	42,566.72	3,280.61
Substation operation.....				389.99	
Substation maintenance.....				17.95	
Distribution system, operation and maintenance.....	1,306.58	190.30	855.57	2,786.98	129.60
Line transformer maintenance.....		111.93		22.61	
Meter maintenance.....	313.26	413.55	110.22	65.06	5.90
Consumers' premises expenses.....					
Street lighting, operation and maintenance.....	248.26	326.95	115.73	228.69	15.40
Promotion of business.....					
Billing and collecting.....	584.50		327.73	838.69	404.96
General office, salaries and expenses.....	325.88	817.26	476.68	1,261.13	64.55
Undistributed expenses.....	76.82		50.00	574.81	19.50
Truck operation and maintenance.....	240.32			274.86	
Interest.....	783.80	588.67	465.85	1,669.04	176.26
Sinking fund and principal payments on debentures.....	1,485.88	462.73	396.58	2,764.58	149.00
Depreciation.....	877.00	666.00	576.00	2,465.00	322.00
Other reserves.....					
Total operating costs and fixed charges.....	20,203.09	16,343.64	10,216.08	55,926.11	4,567.78
Net surplus.....		2,178.22			540.60
Net loss.....	1,918.82		258.09	190.58	
NUMBER OF CONSUMERS					
Domestic service.....	321	228	177	683	97
Commercial light service.....	95	77	59	108	34
Power service.....	13	5	13	25	6
Total.....	429	310	249	816	137



## "B"—Continued

## Hydro Municipalities for Year Ended December 31, 1931

Humberstone 1,926	Ingersoll 5,150	Jarvis 479	Kingsville 2,200	Kitchener 30,274	Lambeth P.V.	La Salle 574	Leamington 5,313
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
9,399.77	32,496.04	1,839.80	13,183.82	190,049.23	3,841.48	8,604.20	25,478.62
2,870.47	16,030.34	1,457.80	7,030.39	106,891.03	1,370.74	2,430.77	16,385.27
2,651.46	22,960.57	4,178.44	2,332.25	223,364.46		2,667.74	11,149.62
.....	1,861.77	.....	1,166.01	23,412.21	308.43	.....	5,508.37
1,299.00	4,675.87	840.00	4,071.04	30,728.12	441.00	995.50	7,292.70
.....	168.29	.....	.....	.....	.....	.....	.....
182.45	1,031.14	101.59	1,112.17	4,217.72	8.94	.....	866.02
16,403.15	79,224.02	8,417.63	28,895.68	578,662.77	5,970.59	14,698.21	66,680.60
8,984.81	55,641.94	6,467.48	15,581.65	395,702.80	3,655.33	8,033.83	37,602.60
.....	524.78	.....	.....	8,144.25	.....	.....	.....
.....	.....	.....	.....	2,229.78	.....	.....	.....
879.33	2,933.07	64.81	3,058.54	15,739.44	382.72	1,419.96	4,232.91
157.30	956.06	3.30	71.39	835.28	.....	.....	36.57
439.05	610.33	59.60	353.30	5,603.17	.....	18.79	398.43
.....	.....	.....	.....	391.97	.....	.....	.....
259.60	670.31	25.54	676.42	11,319.47	89.26	183.14	607.96
.....	.....	.....	.....	3,091.19	.....	.....	.....
.....	1,422.72	429.59	1,032.80	12,004.57	.....	.....	1,443.21
889.03	4,876.85	106.82	1,241.61	10,014.58	281.66	676.25	3,105.07
.....	1,268.72	24.70	551.78	5,503.01	20.00	.....	1,402.97
179.52	540.56	.....	213.90	2,385.64	.....	227.14	612.57
1,426.19	3,335.29	440.59	1,835.81	13,464.07	191.63	749.23	2,421.65
2,000.00	1,677.35	438.05	601.08	21,879.91	121.25	563.88	1,850.97
977.00	3,597.00	350.00	1,724.00	26,860.63	292.00	724.00	2,935.00
.....	71.48	.....	.....	.....	.....	.....	.....
16,191.83	78,126.46	8,410.48	26,942.28	535,169.76	5,033.85	12,596.22	56,649.91
211.32	1,097.56	7.15	1,953.40	43,493.01	936.74	2,101.99	10,030.69
.....	.....	.....	.....	.....	.....	.....	.....
500	1,315	105	704	6,926	110	206	1,287
69	249	38	170	950	23	22	238
7	43	4	13	247	1	4	30
576	1,607	147	887	8,123	134	232	1,555

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality.....	Listowel	London	London Twp.	Long Branch*	Lucan
Population.....	2,712	69,742	7,932	4,016	588
EARNINGS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	17,778.07	467,760.94	10,111.79	21,399.24	4,906.53
Commercial light service.....	8,609.18	200,342.80	1,830.00	6,138.56	1,798.88
Commercial power service.....	11,119.89	356,593.66	1,359.84	1,062.01	1,671.85
Municipal power.....	1,470.34	34,916.72		766.90	
Street lighting.....	3,465.66	52,098.81	949.00	3,281.15	1,061.25
Merchandise.....		5,882.08			
Miscellaneous.....	469.66	26,123.35	172.78	139.00	255.85
Total earnings.....	42,912.80	1,143,718.36	14,423.41	32,786.86	9,694.36
EXPENSES					
Power purchased.....	29,928.76	690,059.92	8,499.25	16,488.37	5,689.31
Substation operation.....		15,861.26			
Substation maintenance.....	87.75	12,812.46			
Distribution system, operation and maintenance.....	2,499.62	18,318.54	525.67	1,675.60	968.59
Line transformer maintenance.....	167.63	1,891.74		74.18	
Meter maintenance.....	104.44	12,727.88		197.12	
Consumers' premises expenses.....		4,835.97			
Street lighting, operation and main- tenance.....	340.14	6,404.26	258.85	352.50	92.01
Promotion of business.....		4,550.36			
Billing and collecting.....	696.35	22,349.74	425.07	1,795.00	385.42
General office, salaries and expenses.....	756.56	38,382.18	446.36	2,218.08	411.26
Undistributed expenses.....	258.29	17,797.32	27.59	649.18	45.77
Truck operation and maintenance...	255.57	7,394.13			
Interest.....	730.60	53,489.42	783.69	2,101.35	253.21
Sinking fund and principal payments on debentures.....	1,540.84	57,940.41	862.77	2,019.77	234.68
Depreciation.....	2,281.00	85,241.91	612.00	1,966.00	571.00
Other reserves.....					
Total operating costs and fixed charges.....	39,647.55	1,050,057.50	12,441.25	29,537.15	8,651.25
Net surplus.....	3,265.25	93,660.86	1,982.16	3,249.71	1,043.11
Net loss.....					
NUMBER OF CONSUMERS					
Domestic.....	700	16,965	314	1,045	171
Commercial light service.....	146	2,726	17	115	44
Power service.....	23	503	3	4	9
Total.....	869	20,194	334	1,164	224

\*11 months' operation. Seceded from Etobicoke Twp., 1st January, 1931. Population estimated.

## "B"—Continued

## Hydro Municipalities for Year Ended December 31, 1931

Lynden P.V.	Markham 931	Merlin P.V.	Merritton 2,596	Milton 1,775	Milverton 981	Mimico 6,108	Mitchell 1,593
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
2,080.68	5,964.01	2,177.14	12,143.12	11,157.44	5,277.04	54,590.99	10,399.31
806.98	2,620.73	1,422.02	2,347.28	5,218.88	2,535.67	8,804.72	4,585.23
831.46	3,869.76	2,993.35	67,492.03	23,736.48	4,778.17	4,258.96	4,182.01
.....	488.15	.....	.....	.....	325.15	3,857.19	825.65
410.00	1,463.00	688.00	2,799.00	1,931.73	999.00	8,504.78	2,088.00
.....	.....	.....	.....	.....	.....	.....	2,606.93
.....	128.13	308.96	190.56	740.28	122.00	1,160.52	42.42
4,129.12	14,533.78	7,589.47	84,971.99	42,784.81	14,037.03	81,177.16	24,729.55
3,084.61	8,876.45	5,255.08	55,683.76	25,091.12	11,338.01	47,178.56	14,173.91
.....	.....	.....	.....	287.05	.....	37.50	311.66
212.60	1,336.18	293.87	3,061.88	3,069.04	349.06	6,850.25	658.19
.....	.....	11.21	35.16	.....	52.65	.....	62.79
38.38	.....	97.02	131.44	210.85	27.45	158.53	308.63
.....	.....	.....	.....	.....	.....	.....	.....
27.39	94.48	48.09	667.11	268.54	186.66	1,262.80	302.46
.....	.....	.....	.....	1,049.90	.....	.....	.....
156.94	.....	248.54	.....	.....	679.82	1,904.18	918.25
10.89	979.75	82.83	2,808.60	1,540.35	213.05	1,850.92	1,549.64
67.90	.....	28.22	.....	556.70	133.28	6,378.91	428.90
.....	108.89	.....	204.32	521.55	.....	694.34	111.02
165.22	113.02	569.51	1,338.91	1,591.58	229.89	4,391.02	.....
138.54	333.78	611.64	1,350.98	1,455.65	608.35	4,341.81	.....
252.00	692.00	333.00	1,860.00	2,239.30	633.00	4,930.00	2,672.00
.....	.....	.....	.....	.....	.....	.....	.....
4,154.47	12,534.55	7,579.01	67,142.16	37,881.63	14,451.22	79,978.82	21,497.45
.....	1,999.23	10.46	17,829.83	4,903.18	.....	1,198.34	3,232.10
25.35	.....	.....	.....	.....	414.19	.....	.....
77	270	106	700	460	228	1,694	434
18	65	44	60	101	77	132	106
1	9	2	10	23	8	12	21
96	344	152	770	584	313	1,838	561



## STATEMENT

## Detailed Operating Reports of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality.....	Moore- field P.V.	Mount Brydges P.V.	Newbury	New Hamburg	New Toronto
Population.....	P.V.	P.V.	291	1,409	6,310
EARNINGS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	785.16	2,657.36	1,183.08	10,106.52	33,141.89
Commercial light service.....	695.88	1,081.82	976.48	4,126.08	11,391.56
Commercial power service.....	1,335.09	933.94	735.25	3,724.04	104,352.50
Municipal power.....					10,580.86
Street lighting.....	375.00	506.00	719.89	2,105.92	8,429.04
Merchandise.....				569.51	
Miscellaneous.....	61.66	191.97	10.98	5.52	1,500.00
Total earnings.....	3,252.79	5,371.09	3,625.68	20,637.59	169,395.85
EXPENSES					
Power purchased.....	2,974.59	3,255.60	2,086.19	14,630.67	141,999.74
Substation operation.....				224.14	
Substation maintenance.....					
Distribution system, operation and maintenance.....	12.55	95.58	28.67	409.27	8,276.71
Line transformer maintenance.....				158.40	163.82
Meter maintenance.....		3.65		675.68	625.58
Consumers' premises expenses.....					
Street lighting, operation and main- tenance.....	23.69	37.25	41.21	451.03	2,065.45
Promotion of business.....			6.52		
Billing and collecting.....		172.92		605.04	2,268.26
General office, salaries and expenses.....	147.00	102.05	210.79	1,049.18	4,231.52
Undistributed expenses.....		19.50	19.50	194.25	3,635.38
Truck operation and maintenance.....				295.28	
Interest.....	24.50	154.14	355.33	478.99	226.52
Sinking fund and principal payments on debentures.....	259.91	137.21	500.00	718.84	275.99
Depreciation.....	171.00	259.00	265.00	1,257.00	4,676.00
Other reserves.....					
Total operating costs and fixed charges.....	3,713.24	4,236.90	3,513.21	21,147.77	168,444.97
Net surplus.....		1,134.19	112.47		950.88
Net loss.....	460.45			510.18	
NUMBER OF CONSUMERS					
Domestic service.....	54	129	60	340	1395
Commercial light service.....	28	43	28	89	146
Power service.....	2	3	2	12	27
Total.....	84	175	90	441	1,568

## "B"—Continued

## Hydro Municipalities for Year Ended December 31, 1931

Niagara Falls 18,539	Niagara-on-the-Lake 1,633	North York Twp. 11,006	Norwich 1,101	Oil Springs 445	Otterville P.V.	Palmerston 1,758	Paris 4,205
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
147,591.52	14,989.27	82,076.06	7,292.19	1,556.30	2,145.17	10,748.18	24,229.68
64,277.12	3,351.88	11,795.05	2,633.84	1,034.42	1,581.99	5,427.90	8,594.97
54,599.94	886.03	21,269.38	1,349.88	7,460.78	692.75	4,781.09	12,235.75
14,644.66	1,672.30	3,514.09	546.27	.....	.....	1,663.57	1,225.00
30,661.84	2,646.75	4,526.03	2,115.00	753.00	753.00	1,717.99	5,724.90
.....	634.20	.....	361.66	.....	.....	.....	.....
68.38	.....	1,949.40	223.70	400.89	155.24	6.01	3,096.25
311,843.46	24,180.43	125,130.01	14,522.54	11,205.39	5,328.15	24,344.74	55,106.55
160,022.66	11,786.40	62,122.65	10,665.19	7,318.24	3,149.17	18,808.78	32,871.48
9,508.19	.....	19.00	.....	.....	.....	.....	139.07
4,920.70	2,063.12	9,278.50	1,497.67	552.96	84.77	844.57	4,470.68
399.23	.....	659.44	98.09	.....	15.66	21.76	.....
6,229.08	80.89	1,392.36	209.38	.....	20.54	66.46	150.32
5,377.78	620.75	1,314.31	246.92	70.21	94.37	387.47	954.43
7,548.46	.....	4,465.68	366.70	306.60	228.17	733.45	1,411.56
9,635.69	1,641.43	3,779.30	337.98	272.21	62.66	780.66	1,082.67
5,664.00	.....	3,993.48	255.34	110.79	21.00	156.39	349.58
2,218.30	327.01	3,026.32	190.84	.....	.....	124.98	295.64
22,561.40	1,322.09	17,913.68	385.81	488.50	102.94	403.59	1,879.42
21,936.68	850.39	12,430.43	512.78	1,004.09	293.16	813.99	1,554.05
22,318.00	1,328.00	9,480.00	758.00	626.00	343.00	1,206.00	4,704.00
278,340.17	20,020.08	129,875.15	15,524.70	10,749.60	4,415.44	24,348.10	49,862.90
33,503.29	4,160.35	.....	.....	455.79	912.71	.....	5,243.65
.....	.....	4,745.14	1,002.16	.....	.....	3.36	.....
4,361	467	2,539	352	70	105	400	1,059
899	72	208	77	28	42	97	179
89	10	36	7	27	3	9	22
5,349	549	2,783	436	125	150	506	1,260

## STATEMENT

## Detailed Operating Reports of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality.....	Parkhill	Petrolia	Plattsville	Point Edward	Port Colborne
Population.....	968	2,532	P.V.	1,232	6,202
<b>EARNINGS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Domestic service.....	4,971.66	11,084.19	2,415.17	5,985.38	30,210.67
Commercial light service.....	2,862.53	6,709.64	897.70	1,751.49	14,089.73
Commercial power service.....	984.27	20,347.43	801.85	17,221.19	8,637.02
Municipal power.....	551.17				7,015.60
Street lighting.....	1,437.00	2,652.00	544.00	1,489.25	7,790.96
Merchandise.....		173.81			
Miscellaneous.....	18.34	717.46		631.61	614.25
Total earnings.....	10,824.97	41,684.53	4,658.72	27,078.92	68,358.23
<b>EXPENSES</b>					
Power purchased.....	7,932.59	27,219.39	2,891.99	19,102.69	39,072.41
Substation operation.....					
Substation maintenance.....		47.50			
Distribution system, operation and maintenance.....	137.46	2,930.89	60.31	189.32	1,703.06
Line transformer maintenance.....		43.10		40.55	560.51
Meter maintenance.....		71.29	18.25	157.55	1,089.78
Consumers' premises expenses.....					
Street lighting, operation and maintenance.....	207.63	112.60	23.81	41.81	2,288.91
Promotion of business.....					863.30
Billing and collecting.....	281.58	757.82	165.55	7.18	1,494.64
General office, salaries and expenses.....	270.08	3,578.23	5.13	1,553.69	2,655.94
Undistributed expenses.....	20.01	717.01	19.50	555.45	464.90
Truck operation and maintenance.....		347.57			1,174.65
Interest.....	518.82	1,715.32	170.31	641.56	6,225.49
Sinking fund and principal payments on debentures.....	894.42	2,000.63	172.04	841.66	6,077.83
Depreciation.....	631.00	2,554.00	223.00	942.00	3,643.00
Other reserves.....					
Total operating costs and fixed charges.....	10,893.59	42,095.35	3,749.89	24,073.46	67,314.42
Net surplus.....			908.83	3,005.46	1,043.81
Net loss.....	68.62	410.82			
<b>NUMBER OF CONSUMERS</b>					
Domestic service.....	231	643	91	298	1,223
Commercial light service.....	75	174	24	45	252
Power service.....	5	53	1	12	21
Total.....	311	870	116	355	1,496



## "B"—Continued

## Hydro Municipalities for Year Ended December 31, 1931

Port Credit 1,600	Port Dalhousie 1,555	Port Dover 1,625	Port Rowan 558	Port Stanley 693	Preston 6,171	Princeton P.V.	Queenston P.V.
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
12,320.51	13,107.77	7,408.24	2,895.98	11,425.91	47,682.46	2,260.98	2,663.79
5,051.02	2,099.69	4,805.31	1,989.93	3,497.21	19,104.14	629.46	236.68
701.75	4,219.28	5,398.07	132.97	3,716.74	40,494.20	3,100.61	813.42
1,045.39				430.18	1,013.25		
3,552.00	1,630.00	2,952.60	1,242.00	1,925.00	5,010.31	364.00	549.59
47.10	173.86			247.85	244.79		32.97
22,717.77	21,230.60	20,564.22	6,260.88	21,242.89	113,549.15	6,355.05	4,296.45
15,546.94	13,812.56	11,553.65	4,340.87	12,761.19	82,800.93	4,936.35	2,384.80
					4,304.76		
996.80	1,642.33	428.59	52.00	2,438.44	3,983.56	49.86	133.62
	19.20	113.00		166.11	115.69		
86.15	87.51	135.50		18.29	1,488.67	11.95	
297.14	94.72	535.49	43.49	107.59	519.94	26.20	74.26
		46					
1,023.20		380.38	379.00	690.91	1,711.58	139.36	
553.63	1,502.69	51.79	19.10	478.50	1,332.94	5.51	338.32
73.02		74.27	62.05	158.42	1,084.52	20.00	
	278.93	17.58		178.84	691.02		
497.57	762.43	1,015.08	1,134.14	487.87	3,436.66	117.52	429.62
471.76	1,170.52	1,868.20	356.15	744.95	5,518.51	116.63	415.08
1,321.00	855.00	1,149.00	307.00	1,100.00	7,587.00	218.00	282.00
20,867.21	20,225.89	17,322.99	6,693.80	19,331.11	114,575.78	5,641.38	4,057.70
1,850.56	1,004.71	3,241.23		1,911.78		713.67	238.75
			432.92		1,026.63		
370	580	458	85	575	1,538	84	68
75	46	128	34	80	232	17	7
5	11	11	1	13	49	3	1
450	637	597	120	668	1,819	104	76

# STATEMENT

## Detailed Operating Reports of Electrical Department of

### NIAGARA SYSTEM—Continued

Municipality.....	Richmond Hill	Ridgetown	Riverside	Rockwood	Rodney
Population.....	1,197	1,981	5,125	P.V.	690
EARNINGS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	6,968.21	9,562.03	40,470.28	3,134.96	3,140.19
Commercial light service.....	3,495.22	5,211.84	5,529.95	1,322.63	2,739.18
Commercial power service.....	2,263.23	4,520.89	6,709.46	335.21	1,669.73
Municipal power.....	400.38	856.49	2,950.79		
Street lighting.....	1,389.00	3,577.66	4,728.96	747.00	1,006.19
Merchandise.....		66.14			
Miscellaneous.....	35.14	516.33			264.65
Total earnings.....	14,551.18	24,311.38	60,389.44	5,539.80	8,819.94
EXPENSES					
Power purchased.....	9,057.14	14,650.76	37,388.08	3,942.37	5,762.15
Substation operation.....					
Substation maintenance.....					
Distribution system, operation and maintenance.....	1,797.32	830.90	2,365.77	133.71	217.03
Line transformer maintenance.....		43.31	606.15		82.39
Meter maintenance.....	168.91	79.69	1,926.05	75.76	21.22
Consumers' premises expenses.....			566.72		
Street lighting, operation and main- tenance.....	105.83	326.03	1,426.66	47.21	117.53
Promotion of business.....			135.34	7.01	
Billing and collecting.....		634.88	3,997.97		413.02
General office, salaries and expenses.....	909.17	1,457.96	1,923.48	470.05	81.74
Undistributed Expenses.....		335.05	2,069.26		24.46
Truck operation and maintenance.....					
Interest.....	323.53	470.14	3,620.46	149.41	342.34
Sinking fund and principal payments on debentures.....	611.23	318.32	3,348.30		248.30
Depreciation.....	489.00	1,255.00	3,561.00	396.00	460.00
Other reserves.....					
Total operating costs and fixed charges.....	13,462.13	20,402.04	62,935.24	5,221.52	7,770.18
Net surplus.....	1,089.05	3,909.34		318.28	1,049.76
Net loss.....			2,545.80		
NUMBER OF CONSUMERS					
Domestic service.....	332	547	1,093	145	195
Commercial light service.....	63	135	61	33	75
Power service.....	12	22	8	1	5
Total.....	407	704	1,162	179	275

“B”—Continued

Hydro Municipalities for Year Ended December 31, 1931

St. Catharines 25,347	St. Clair Beach 115	St. George P.V.	St. Jacobs P.V.	St. Marys 4,073	St. Thomas 16,869	Sandwich 11,819	Sarnia 17,003
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
142,788.23	2,325.44	2,733.14	3,221.42	28,076.43	102,173.05	91,273.04	101,605.37
46,912.45	1,388.82	783.10	1,241.10	9,124.12	46,693.72	21,573.58	49,307.01
84,479.14	518.72	2,031.86	1,743.45	15,963.22	47,106.38	14,649.32	157,154.00
.....	.....	.....	.....	1,205.37	6,169.72	.....	.....
25,309.73	.....	304.00	460.00	3,504.00	14,506.63	10,555.22	18,814.65
225.59	.....	.....	.....	441.40	.....	553.03	.....
5,405.80	.....	121.93	172.10	46.41	2,735.67	2,172.99	1,179.66
305,120.94	4,232.98	5,974.03	6,838.07	58,360.95	219,385.17	140,777.18	328,060.69
.....	.....	.....	.....	.....	.....	.....	.....
181,658.40	2,907.35	5,197.86	5,823.74	42,587.27	142,580.10	102,414.75	207,652.37
5,722.90	.....	.....	.....	1,363.30	6,455.35	.....	5,133.50
.....	.....	.....	.....	101.57	724.13	29.68	305.68
14,635.30	539.41	33.35	25.92	901.90	7,113.51	2,390.78	7,596.01
2,594.10	48.71	15.90	.....	166.33	1,029.31	343.48	1,208.39
3,455.08	78.12	54.40	22.68	663.29	1,621.57	1,476.81	2,568.63
.....	66.85	.....	.....	.....	1,841.39	.....	.....
3,156.41	.....	86.80	47.05	856.20	1,516.52	2,426.64	3,899.74
976.00	15.00	.....	.....	.....	130.78	610.62	1,206.16
10,557.87	210.27	562.48	.....	1,297.13	3,976.15	5,958.52	5,976.93
12,053.74	4.00	53.09	419.46	1,565.64	11,515.92	6,501.82	10,427.36
6,890.31	175.24	45.52	20.00	341.68	7,127.81	2,489.89	6,781.35
5,449.51	.....	.....	.....	562.73	2,210.57	1,631.25	4,042.20
13,177.41	247.16	218.74	156.91	1,992.76	2,141.41	6,994.66	10,913.75
10,522.01	291.49	194.09	345.18	1,671.97	4,782.75	5,762.09	18,215.31
16,082.00	294.00	303.00	317.00	3,927.00	11,987.00	5,418.00	16,319.00
.....	.....	.....	.....	.....	70.06	.....	.....
286,931.04	4,877.60	6,765.23	7,177.94	57,998.77	206,824.33	144,448.99	302,246.38
18,189.90	.....	.....	.....	362.18	12,560.84	.....	25,814.31
.....	644.62	791.20	339.87	.....	.....	3,671.81	.....
.....	.....	.....	.....	.....	.....	.....	.....
6,170	49	130	107	1,021	4,157	2,803	4,574
677	10	30	25	192	664	237	664
145	2	3	6	35	102	37	89
6,992	61	163	138	1,248	4,923	3,077	5,327



## STATEMENT

## Detailed Operating Reports of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality.....	Scarboro' Twp. 18,212	Seaforth 1,689	Simcoe 5,044	Springfield 404	Stamford Twp. 7,128
EARNINGS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	85,255.70	10,262.81	17,431.74	1,770.18	52,154.47
Commercial light service.....	18,389.04	5,599.77	23,580.07	750.55	7,229.50
Commercial power service.....	12,444.85	4,775.79	24,873.09	1,977.26	2,663.45
Municipal power.....	11,150.28	753.71	2,339.27	.....	3,095.54
Street lighting.....	17,148.75	1,788.00	3,940.29	550.00	8,270.21
Merchandise.....	.....	374.16	199.16	.....	434.89
Miscellaneous.....	384.29	688.99	.....	210.90	.....
Total earnings.....	144,772.91	24,243.23	72,363.62	5,258.89	73,848.06
EXPENSES					
Power purchased.....	75,345.75	15,732.99	40,788.17	3,502.68	34,881.98
Substation operation.....	113.69	.....	.....	.....	557.70
Substation maintenance.....	.....	.....	219.71	.....	.....
Distribution system, operation and maintenance.....	4,852.61	1,550.26	4,207.34	229.91	3,855.60
Line transformer maintenance.....	852.67	48.37	158.26	.....	.....
Meter maintenance.....	1,488.68	190.34	1,428.71	.....	250.30
Consumers' premises expenses.....	.....	.....	.....	.....	.....
Street lighting, operation and main- tenance.....	2,010.38	268.56	479.74	65.35	885.96
Promotion of business.....	.....	.....	.....	.....	.....
Billing and collecting.....	4,668.33	709.32	1,600.80	302.60	4,156.84
General office, salaries and expenses.....	6,047.28	1,009.05	1,386.05	76.86	4,055.11
Undistributed expenses.....	2,182.53	161.56	774.78	42.31	2,370.79
Truck operation and maintenance.....	2,358.61	38.98	317.00	.....	2,132.62
Interest.....	12,754.98	1,272.90	2,875.21	225.41	8,957.37
Sinking fund and principal payments on debentures.....	11,950.02	445.70	2,316.77	151.63	9,490.32
Depreciation.....	9,710.00	1,638.00	2,975.00	309.00	5,540.00
Other reserves.....	.....	106.96	.....	.....	.....
Total operating costs and fixed charges.....	134,335.53	23,172.99	59,527.54	4,905.75	77,134.59
Net surplus.....	10,437.38	1,070.24	12,836.08	353.14	.....
Net loss.....	.....	.....	.....	.....	3,286.53
NUMBER OF CONSUMERS					
Domestic service.....	4,210	478	997	93	1,633
Commercial light service.....	334	113	296	34	115
Power service.....	36	14	41	4	12
Total.....	4,580	605	1,334	131	1,760

“B”—Continued

Hydro Municipalities for Year Ended December 31, 1931

Stouffville 1,070	Stratford 18,909	Strathroy 2,755	Sutton 831	Tavistock 959	Tecumseh 2,560	Thames- ford P.V.	Thames- ville 884
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
6,751.53	150,432.56	20,288.12	7,837.57	7,101.24	15,522.45	2,369.93	4,066.23
2,601.24	52,609.35	11,071.97	3,235.45	2,123.46	3,713.63	1,430.28	3,455.08
1,160.04	50,572.64	7,946.41	1,368.98	7,918.67	3,988.76	2,897.36	1,577.22
.....	10,670.74	1,503.17	.....	453.23	.....	.....	240.75
1,705.66	16,517.32	4,338.96	1,891.34	1,189.50	1,089.00	517.00	1,186.50
.....	2,784.92	466.42	.....	.....	.....	.....	.....
350.57	5,947.59	965.39	.....	306.11	.....	339.54	289.73
12,569.04	289,535.12	46,580.44	14,333.34	19,092.21	24,313.84	7,554.11	10,815.51
7,198.89	199,820.66	28,566.03	8,944.97	15,623.69	14,186.70	5,789.43	6,547.15
.....	4,732.69	227.80	.....	.....	.....	.....	.....
.....	1,013.87	100.33	.....	.....	.....	.....	.....
764.63	5,674.72	1,966.20	457.39	616.42	957.84	185.07	460.10
.....	316.26	2.93	.....	65.67	168.27	23.60	.....
.....	3,611.17	252.68	.....	250.22	1,043.98	52.31	.....
.....	.....	.....	.....	.....	213.56	.....	.....
176.15	3,159.15	561.42	148.18	238.00	350.62	32.28	250.97
.....	.....	.....	.....	.....	35.47	.....	.....
.....	5,920.48	1,098.81	.....	513.01	1,692.42	200.00	285.13
452.58	8,906.58	2,311.49	563.62	121.95	607.26	26.75	440.00
.....	3,272.26	460.16	.....	31.63	850.97	27.41	27.37
.....	1,625.25	145.40	.....	.....	.....	.....	.....
582.04	21,775.00	1,083.91	1,110.21	211.51	1,462.01	116.09	319.17
1,359.19	10,022.36	1,792.82	1,209.86	178.80	1,160.07	185.80	510.78
483.00	18,500.00	2,873.00	738.00	711.00	1,354.00	409.00	675.00
.....	372.77	.....	.....	.....	.....	.....	.....
11,015.48	288,723.22	41,442.98	13,172.23	18,561.90	24,083.17	7,047.74	9,515.67
1,553.56	811.90	5,137.46	1,161.11	530.31	230.67	506.37	1,299.84
.....	.....	.....	.....	.....	.....	.....	.....
316	4,321	803	374	258	481	117	214
81	638	180	77	76	50	39	76
5	144	26	5	5	6	8	8
402	5,103	1,009	456	339	537	164	298

## STATEMENT

## Detailed Operating Reports of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality.....	Thedford	Thorndale	Thorold	Tilbury	Tillson- burg
Population.....	539	P.V.	5,000	1,905	3,189
EARNINGS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	2,732.81	1,601.92	19,385.93	6,444.53	13,870.07
Commercial light service.....	1,726.77	1,137.08	6,705.36	6,327.54	12,552.78
Commercial power service.....	445.52	233.64	28,949.82	8,791.33	10,148.30
Municipal power.....			3,455.31	402.42	904.49
Street lighting.....	1,035.00	372.00	3,551.00	1,565.55	2,872.00
Merchandise.....					1.38
Miscellaneous.....	277.50		267.07	537.30	1,184.34
Total earnings.....	6,217.60	3,344.64	62,314.49	24,068.67	41,533.36
EXPENSES					
Power purchased.....	4,124.65	3,030.33	46,531.90	16,546.92	25,986.62
Substation operation.....					1,106.52
Substation maintenance.....			2,218.46		
Distribution system, operation and maintenance.....	178.35	112.63	3,823.83	1,969.54	1,940.03
Line transformer maintenance.....			9.96	16.78	38.56
Meter maintenance.....		10.78	151.10	58.19	440.15
Consumers' premises expenses.....					
Street lighting, operation and main- tenance.....	59.88	40.86	410.81	117.02	441.46
Promotion of business.....					
Billing and collecting.....	140.95	101.18	888.48	345.84	733.46
General office, salaries and expenses	100.89	4.42	669.65	516.96	3,449.03
Undistributed expenses.....	26.29	21.50	591.12	268.88	654.63
Truck operation and maintenance...			347.00		485.25
Interest.....	682.09	84.91	74.73	508.05	702.57
Sinking fund and principal payments on debentures.....	757.81	78.97	604.61	567.17	1,404.26
Depreciation.....	335.00	212.00	2,571.00	1,008.00	2,875.00
Other reserves.....					36.57
Total operating costs and fixed charges.....	6,405.91	3,697.58	58,892.65	21,923.35	40,294.11
Net surplus.....			3,421.84	2,145.32	1,239.25
Net loss.....	188.31	352.94			
NUMBER OF CONSUMERS					
Domestic service.....	130	62	1,181	430	843
Commercial light service.....	38	25	182	136	228
Power service.....	2	1	13	14	30
Total.....	170	88	1,376	580	1,101



## "B"—Continued

## Hydro Municipalities for Year Ended December 31, 1931

Toronto 606,370	Toronto Twp. 8,100	Trafalgar Twp. Zone No. 1 3,694	Trafalgar Twp., Zone No. 2	Walker- ville 11,219	Wallace- burg 4,268	Wards- ville 209	Water- down 917
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
3,555,074.49	53,851.71	14,088.59	4,187.75	105,476.65	17,432.67	1,040.25	6,268.64
3,034,453.46	13,933.95	609.71	1,505.51	34,075.65	10,097.45	1,173.74	1,446.86
3,467,114.46	5,288.48	649.04		157,371.30	37,811.78	289.82	2,272.72
1,440,772.68					1,451.41		371.47
520,325.71	4,951.26			15,543.48	4,319.01	700.00	930.00
				305.98			
272,491.27	873.87	126.10	14.99	12,416.61	994.43	34.73	52.81
12,290,232.07	78,899.27	15,473.44	5,708.25	325,189.67	72,106.75	3,238.54	11,342.50
6,215,251.58	43,218.05	7,153.60	2,460.39	217,721.31	55,167.37	1,799.35	7,595.21
239,299.72				7,264.19	238.26		
237,170.79				1,791.64			
418,109.90	3,625.41	2,412.81	424.60	3,579.03	2,536.65	160.80	290.78
38,821.22	302.09			956.27	483.23		
116,117.96	350.37	80.83		3,368.79	954.21		28.32
312,503.27				3,440.26			
140,239.02	547.04			2,805.14	465.31	74.75	137.72
200,728.20				557.68	501.43		
355,368.93	3,285.81			7,360.40	2,356.62		659.72
348,681.38	4,749.22	1,308.88	519.11	12,688.81	2,879.46	183.79	594.98
*185,158.39	553.11	82.56	22.15	9,230.95	1,269.81		58.96
	1,449.11	368.45		1,118.82	1,096.40		
1,373,841.49	4,403.62	839.21	520.36	11,122.41	3,021.32	357.85	48.37
1,118,073.25	4,575.94	834.39		13,726.81	2,456.32	367.42	473.22
757,146.89	7,406.00	1,012.00	238.00	15,152.00	4,476.00	214.00	765.00
12,056,511.99	74,465.77	14,092.73	4,184.61	311,884.51	77,902.39	3,157.96	10,652.28
233,720.08	4,433.50	1,380.71	1,523.64	13,305.16		80.58	690.22
					5,795.64		
148,879	1,732	271	110	2,468	1,003	52	220
25,126	178	2	19	341	217	25	32
4,266	22	10		102	28	1	7
178,271	1,932	283	129	2,911	1,248	78	259

\*Includes \$81,500.00 York Twp. Debenture Charges and Reserve for Profit.

**STATEMENT**

**Detailed Operating Reports of Electrical Departments of**

**NIAGARA  
SYSTEM—Continued**

Municipality.....	Waterford	Waterloo	Watford	Welland	Wellesley
Population.....	1,091	8,389	977	10,141	P.V.
EARNINGS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	7,162.68	57,887.66	6,428.39	51,553.49	2,818.32
Commercial light service.....	1,817.95	21,688.02	3,503.88	31,672.11	893.00
Commercial power service.....	3,652.02	28,477.71	2,279.71	59,549.52	1,693.99
Municipal power.....	241.41	3,417.41	382.02	2,499.25	.....
Street lighting.....	1,608.00	7,387.05	1,332.48	11,176.09	720.00
Merchandise.....	.....	649.60	.....	2,235.57	.....
Miscellaneous.....	369.66	44.29	156.56	6,477.47	83.58
Total earnings.....	14,851.72	119,551.74	14,083.04	165,163.50	6,208.89
EXPENSES					
Power purchased.....	11,395.17	79,703.15	9,204.50	82,030.69	4,837.85
Substation operation.....	.....	2,425.26	.....	5,217.94	.....
Substation maintenance.....	.....	396.48	.....	218.76	.....
Distribution system, operation and maintenance.....	444.43	5,701.68	843.53	6,326.63	461.37
Line transformer maintenance.....	.....	267.02	.....	346.66	.....
Meter maintenance.....	.....	454.08	.....	3,002.77	.....
Consumers' premises expenses.....	.....	.....	.....	82.57	.....
Street lighting, operation and maintenance.....	181.67	984.02	58.56	1,118.90	91.12
Promotion of business.....	.....	.....	.....	.....	.....
Billing and collecting.....	559.00	2,314.20	527.10	4,047.87	.....
General office, salaries and expenses	420.24	5,497.56	534.54	8,170.70	420.25
Undistributed expenses.....	78.08	707.14	71.42	1,951.34	20.55
Truck operation and maintenance...	.....	1,610.90	182.41	1,626.90	.....
Interest.....	.....	3,569.21	196.53	15,850.76	192.92
Sinking fund and principal payments on debentures.....	.....	4,431.58	640.26	8,695.62	460.96
Depreciation.....	904.00	7,988.00	676.00	11,652.53	277.00
Other reserves.....	.....	.....	.....	.....	.....
Total operating costs and fixed charges.....	13,982.59	116,050.28	12,934.85	150,340.64	6,762.02
Net surplus.....	869.13	3,501.46	1,148.19	14,822.86	.....
Net loss.....	.....	.....	.....	.....	553.13
NUMBER OF CONSUMERS					
Domestic service.....	316	1,836	275	2,223	126
Commercial light service.....	69	239	79	433	29
Power service.....	10	77	5	77	3
Total.....	395	2,152	359	2,733	158

## "B"—Continued

## Hydro Municipalities for Year Ended December 31, 1931

West Lorne 741	Weston 4,606	Wheatley 748	Windsor 70,031	Wood- bridge 737	Wood- stock 10,898	Wyoming 473	*York Twp. 60,207
3,389.60	37,855.97	4,523.52	505,424.36	5,414.99	79,454.56	2,040.75	506,012.31
1,772.02	9,165.58	2,936.43	270,976.09	1,582.12	41,932.75	1,375.04	47,598.73
4,672.87	38,745.29	2,085.43	190,161.02	4,101.01	49,215.14	90.34	112,178.77
.....	1,966.55	388.33	13,393.72	375.99	3,251.63	.....	.....
1,010.04	7,777.58	1,852.00	87,768.07	827.52	7,783.40	750.00	61,118.17
.....	.....	.....	.....	.....	312.25	.....	.....
.....	383.01	.....	.....	.....	3,083.06	4.17	16,443.98
10,844.53	95,893.98	11,785.71	1,067,723.26	12,301.63	185,032.79	4,260.30	743,351.96
7,810.08	69,018.92	7,094.54	624,718.77	10,806.89	119,879.90	2,964.46	324,137.73
.....	.....	.....	15,733.70	.....	2,694.77	.....	26,872.18
.....	792.63	.....	9,166.19	.....	418.81	.....	.....
42.34	4,554.26	433.56	21,287.46	671.20	5,204.58	240.37	16,251.42
.....	108.60	51.20	4,418.49	.....	448.23	.....	4,175.32
8.88	190.08	31.72	9,389.73	178.96	796.00	.....	8,449.04
.....	.....	.....	17,929.38	.....	.....	.....	21,326.19
81.26	1,909.24	406.38	27,831.59	159.80	2,184.99	48.01	10,409.15
.....	.....	.....	7,930.33	.....	.....	.....	4,480.02
528.04	.....	330.75	37,353.67	.....	3,407.81	136.03	37,728.30
172.42	3,989.77	241.57	22,041.98	783.24	4,911.99	215.93	26,253.23
19.76	419.52	113.72	35,260.95	.....	2,149.00	.....	25,111.25
.....	593.43	.....	11,757.94	.....	817.52	.....	.....
363.47	2,614.23	545.09	78,017.14	409.99	3,623.89	228.54	160,126.17
228.79	2,716.52	542.35	81,209.44	261.99	2,535.31	666.72	19,629.51
570.00	4,498.00	546.00	61,637.00	843.00	10,792.00	348.00	17,781.00
.....	.....	.....	.....	.....	869.55	.....	.....
9,825.04	91,405.20	10,336.88	1,065,683.76	14,115.07	160,734.35	4,848.06	702,730.51
1,019.49	4,488.78	1,448.83	2,039.50	.....	24,298.44	.....	40,621.45
.....	.....	.....	.....	1,813.44	.....	587.76	.....
195	1,201	184	14,400	214	2,842	128	.....
52	179	65	2,345	46	461	47	.....
5	26	4	336	7	92	2	.....
252	1,406	253	17,081	267	3,395	177	.....

\*For year ended December 31, 1930. Included in Toronto figures. Not added in Summary.



## STATEMENT

## Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Concluded			GEORGIAN BAY SYSTEM		
Municipality.....	Zurich	NIAGARA SYSTEM SUMMARY	Alliston	Arthur	Barrie
Population.....	P.V.		1,364	954	7,166
EARNINGS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	3,131.39	9,490,449.93	8,894.37	4,612.80	45,271.66
Commercial light service.....	1,982.98	5,278,148.52	4,289.70	3,849.03	25,971.15
Commercial power service.....		7,794,708.66	1,788.40	1,478.94	14,034.09
Municipal power.....		1,795,089.74	1,333.00		922.23
Street lighting.....	693.00	1,450,930.28	2,058.00	1,782.00	5,145.00
Merchandise.....		22,411.30			120.77
Miscellaneous.....	119.50	443,262.82	288.14		1,036.70
Total earnings.....	5,926.87	26,275,001.25	18,651.61	11,722.77	92,501.60
EXPENSES					
Power purchased.....	5,202.61	14,965,415.05	11,283.41	8,880.36	83,116.41
Substation operation.....		438,839.22			
Substation maintenance.....		293,078.85			156.79
Distribution system, operation and maintenance.....	326.23	827,978.18	1,529.13	626.67	5,703.37
Line transformer maintenance.....		86,902.83			492.69
Meter maintenance.....		241,634.62			219.55
Consumers' premises expenses.....		377,049.54			
Street lighting, operation and main- tenance.....	96.63	304,466.26	86.18	99.14	1,861.41
Promotion of business.....		242,341.81			
Billing and collecting.....		704,098.34			2,254.81
General office, salaries and expenses.....	204.10	780,391.47	816.05	385.90	1,843.92
Undistributed expenses.....		432,815.31			1,225.28
Truck operation and maintenance.....		83,343.44			614.78
Interest.....	233.07	2,255,896.53	1,918.45	1,132.11	2,244.55
Sinking fund and principal payments on debentures.....	156.93	1,885,361.96	1,229.52	642.72	1,526.40
Depreciation.....	347.00	1,521,809.41	1,221.00	859.00	6,164.00
Other reserves.....		2,611.34			
Total operating costs and fixed charges.....	6,566.57	25,444,034.16	18,083.74	12,625.90	107,423.96
Net surplus.....		830,967.09	567.87		
Net loss.....	639.70			903.13	14,922.36
NUMBER OF CONSUMERS					
Domestic service.....	119	357,285	350	173	1,835
Commercial light service.....	46	57,461	102	85	345
Power service.....		9,825	15	4	44
Total.....	165	424,571	467	262	2,224

“B”--Continued

Hydro Municipalities for Year Ended December 31, 1931

Beaverton	Beeton	Bradford	Brechin	Cannington	Chatsworth	Chesley	Coldwater
988	561	933	P.V.	849	251	1,702	563
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
9,218.07	3,866.35	5,315.32	1,125.37	4,853.42	1,308.17	8,335.36	2,662.98
2,356.39	2,513.06	3,528.25	1,030.59	2,299.22	1,452.21	4,314.44	1,533.38
2,114.29	3,596.77	3,008.10	1,073.54	843.86	336.09	9,123.04	4,389.57
.....	.....	350.60	.....	.....	.....	727.32	.....
1,031.01	1,185.00	1,206.00	576.00	956.16	451.00	1,596.00	571.00
.....	6.94	.....	.....	.....	.....	28.84	.....
215.83	29.14	287.45	.....	219.63	75.98	663.17	331.01
14,935.59	11,197.26	13,695.72	3,805.50	9,172.29	3,623.45	24,788.17	9,487.94
10,960.79	8,640.70	8,991.33	2,837.48	6,605.70	2,256.97	17,754.11	8,576.99
.....	.....	.....	.....	.....	.....	.....	.....
1,084.45	193.76	612.08	326.58	608.65	40.88	794.81	568.51
.....	.....	.....	.....	.....	.....	.....	.....
186.16	68.16	140.02	137.03	61.56	15.86	142.93	48.50
.....	.....	.....	.....	.....	.....	366.31	360.56
787.35	452.97	844.84	113.06	567.02	335.70	731.63	44.08
.....	.....	.....	.....	11.01	.....	.....	.....
440.97	584.47	1,265.33	234.86	546.51	290.92	142.66	241.53
.....	.....	.....	.....	.....	.....	604.49	.....
544.98	405.45	742.57	88.54	545.01	207.25	1,732.48	240.13
1,118.00	536.00	810.00	128.00	590.00	234.00	1,125.00	492.00
.....	.....	.....	.....	.....	.....	.....	.....
15,122.70	10,881.51	13,406.17	3,865.55	9,535.46	3,381.58	23,394.42	10,572.30
.....	315.75	289.55	.....	.....	241.87	1,393.75	.....
187.11	.....	.....	60.05	363.17	.....	.....	1,084.36
423	121	203	42	236	68	421	133
63	37	62	30	71	26	104	56
10	6	8	4	10	1	21	4
496	164	273	76	317	95	546	193

## STATEMENT

## Detailed Operating Reports of Electrical Departments of

GEORGIAN BAY  
SYSTEM—Continued

Municipality.....	Colling- wood 6,027	Cooks- town P.V.	Creemore 598	Dundalk 659	Durham 1,744
Population.....					
EARNINGS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	26,487.67	2,191.26	2,266.16	2,533.73	5,703.53
Commercial light service.....	10,983.15	1,416.85	1,830.17	2,252.99	4,000.06
Commercial power service.....	19,675.55	363.59	1,315.99	2,031.53	10,272.32
Municipal power.....	1,271.88				341.12
Street lighting.....	3,369.65	952.00	590.16	900.00	1,802.60
Merchandise.....	235.38				
Miscellaneous.....	1,484.69	49.16	208.70	229.05	993.40
Total earnings.....	63,507.97	4,972.86	6,211.18	7,947.30	23,113.03
EXPENSES					
Power purchased.....	55,326.29	2,781.41	5,513.55	6,497.51	18,293.04
Substation operation.....	42.51				
Substation maintenance.....	6.50				
Distribution system, operation and maintenance.....	1,961.21	70.00	291.47	862.42	605.72
Line transformer maintenance.....	25.44				
Meter maintenance.....	1,041.93				
Consumers' premises expenses.....					
Street lighting, operation and main- tenance.....	185.21	59.61	66.58	105.52	113.82
Promotion of business.....					
Billing and collecting.....	2,858.68				
General office, salaries and expenses.....	2,334.65	378.09	227.29	604.71	1,941.43
Undistributed expenses.....	847.17				434.84
Truck operation and maintenance.....	298.19				213.45
Interest.....	207.07	540.04	153.54	98.20	477.36
Sinking fund and principal payments on debentures.....	2,382.14	733.09	448.87	320.15	2,154.03
Depreciation.....	1,350.00	456.00	370.00	399.00	1,039.00
Other reserves.....					
Total operating costs and fixed charges.....	68,866.99	5,018.24	7,071.30	8,887.51	25,272.69
Net surplus.....					
Net loss.....	5,359.02	45.38	860.12	940.21	2,159.66
NUMBER OF CONSUMERS					
Domestic service.....	1,403	100	158	161	402
Commercial light service.....	261	33	52	73	110
Power service.....	55	3	4	3	13
Total.....	1,719	136	214	237	525



## "B"—Continued

## Hydro Municipalities for Year Ended December 31, 1931

Elmvale P.V.	Elmwood P.V.	Flesherton 448	Grand Valley 590	Graven- hurst 1,822	Hanover 2,920	Holstein P.V.	Huntsville 2,903
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
2,587.82	1,067.09	2,523.69	3,240.63	8,633.10	18,930.53	1,340.81	10,639.75
1,809.15	551.90	1,718.51	2,522.17	6,013.60	6,405.23	627.73	6,351.87
3,193.03	1,263.07	904.97	1,692.06	6,997.45	18,720.46	298.82	13,793.48
132.70				588.41	308.75		1,126.67
660.00	483.00	543.00	928.00	2,116.72	3,488.16	490.00	2,512.00
				629.10			26.26
130.52	58.71	31.82	487.68	422.73	1,566.27		593.12
8,513.22	3,423.77	5,721.99	8,870.54	25,401.11	49,419.40	2,757.36	35,043.15
6,658.58	2,677.01	3,726.64	6,230.42	13,222.14	34,641.99	1,944.60	25,521.47
942.28	10.73	125.74	340.89	2,807.67	2,359.49	16.13	3,580.74
					196.25		
					215.75		
54.20	26.06	16.21	63.88	453.48	92.26		168.56
284.51	164.99	378.87	568.09	2,764.74	1,204.70		
					392.03	165.30	1,967.33
					691.26		
207.54	233.13	414.10	282.95	1,062.84	121.30		
253.56	402.74	239.12	676.08	2,349.33	2,977.65	172.41	319.90
552.00	218.00	305.78	500.00	1,480.00	4,701.50	192.08	1,633.11
					3,054.00	104.00	985.00
8,952.67	3,732.66	5,206.46	8,662.31	24,140.20	50,648.18	2,594.52	34,176.11
		515.53	208.23	1,260.91		162.84	867.04
439.45	308.89				1,228.78		
143	56	131	147	439	703	55	542
56	18	44	53	96	121	19	129
10	1	2	2	13	18	1	10
209	75	177	202	548	842	75	681

## STATEMENT

## Detailed Operating Reports of Electrical Departments of

GEORGIAN BAY  
SYSTEM—Continued

Municipality.....	Kincardine	Kirkfield	Lucknow	Markdale	Meaford
Population.....	2,218	P.V.	1,115	812	2,708
EARNINGS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	13,526.92	803.01	7,036.08	3,650.03	12,194.00
Commercial light service.....	6,636.36	962.48	3,006.48	2,733.20	6,402.58
Commercial power service.....	6,327.41	429.92	3,214.50	692.48	4,017.32
Municipal power.....	1,519.59		105.95	302.59	738.90
Street lighting.....	3,977.08	460.93	1,693.00	686.70	3,425.16
Merchandise.....					
Miscellaneous.....	99.79		150.80	227.50	840.33
Total earnings.....	32,087.15	2,656.34	15,206.81	8,292.50	27,618.29
EXPENSES					
Power purchased.....	21,165.15	1,600.65	11,455.67	5,600.82	17,222.97
Substation operation.....					
Substation maintenance.....					
Distribution system, operation and maintenance.....	1,698.72	225.86	295.36	229.59	1,216.86
Line transformer maintenance.....					79.15
Meter maintenance.....					87.52
Consumers' premises expenses.....					
Street lighting, operation and maintenance.....	243.56	32.89	91.12	96.68	91.00
Promotion of business.....	104.99				201.00
Billing and collecting.....	975.49				858.16
General office, salaries and expenses.....	652.81	45.13	908.55	544.49	2,165.07
Undistributed expenses.....	546.90				274.69
Truck operation and maintenance.....	230.89				110.99
Interest.....	2,333.41	284.87	800.78	378.55	2,070.89
Sinking fund and principal payments on debentures.....	2,827.61	292.09	861.16	272.78	711.75
Depreciation.....	1,838.00	190.00	670.00	572.00	1,225.00
Other reserves.....					
Total operating costs and fixed charges.....	32,617.53	2,671.49	15,082.64	7,694.91	26,315.05
Net surplus.....			124.17	597.59	1,303.24
Net loss.....	530.38	15.15			
NUMBER OF CONSUMERS					
Domestic service.....	583	27	270	184	628
Commercial light service.....	122	18	86	76	132
Power service.....	18	1	6	9	16
Total.....	723	46	362	269	776

\*9 months' operation.

## "B"—Continued

## Hydro Municipalities for Year Ended December 31, 1931

Midland 7,116	Mount Forest 1,888	Neustadt 460	Orangeville 2,772	Owen Sound 12,778	Paisley 716	Penetang- uishene 3,767	Port Elgin* 1,203
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
34,816.42	7,142.33	2,239.29	12,913.59	57,906.42	3,708.92	9,570.03	5,451.01
13,938.03	5,415.29	1,273.77	9,004.49	35,286.99	2,681.92	3,940.42	3,219.82
52,790.95	3,714.46	105.38	7,010.54	37,685.78	1,325.23	9,818.88	2,446.92
2,996.21	1,239.15		1,496.65			1,752.72	668.22
6,190.85	2,358.00	975.00	3,442.36	10,939.75	1,408.00	1,920.00	1,424.64
			39.77	46.45			
2,116.88	516.96		25.00	1,039.20	139.22	216.36	208.34
112,849.34	20,416.19	4,593.44	33,932.40	142,904.59	9,263.29	27,218.41	13,418.95
96,475.73	15,270.49	3,358.14	23,624.61	113,335.98	6,383.14	23,123.44	6,132.08
2,146.62				3,992.55		656.14	
302.07						6.89	
4,343.02	1,602.33	51.90	1,399.08	5,443.44	168.38	1,898.31	614.58
206.78				421.62		140.15	3.20
991.36			260.93	1,516.82		74.28	290.92
1,232.72	241.99	17.25	305.71	3,442.21	135.28	197.46	129.64
873.81							
2,460.73			994.75	4,939.44		924.95	590.78
2,230.45	1,048.05	323.92	79.50	5,920.87	459.84	682.95	68.66
1,880.61			132.63	2,723.11		232.28	30.00
322.54				869.89		127.19	
2,861.77	761.88	923.01	750.04	1,038.57	674.52	1,071.42	1,666.99
5,556.11	1,238.72	889.51	2,119.89	671.74	667.51	1,798.30	1,058.50
8,739.00	1,207.00	543.00	1,711.00	6,488.00	463.00	2,605.00	619.00
130,623.32	21,370.46	6,106.73	31,378.14	150,804.24	8,951.67	33,538.76	11,204.35
			2,554.26		311.62		2,214.60
17,773.98	954.27	1,513.29		7,899.65		6,320.35	
1,540	446	97	650	3,092	175	560	355
237	141	28	158	574	51	102	83
64	12	2	27	124	4	27	9
1,841	599	127	835	3,790	230	689	447



## STATEMENT

## Detailed Operating Reports of Electrical Departments of

GEORGIAN BAY  
SYSTEM—Continued

Municipality.....	Port McNicoll 825	Port Perry 1,288	Priceville P.V.	Ripley 410	Rosseau*
Population.....					230
<b>EARNINGS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Domestic service.....	2,903.37	6,623.52	661.15	2,859.52	957.07
Commercial light service.....	437.30	2,652.99	393.91	2,001.53	487.83
Commercial power service.....		3,511.37			
Municipal power.....		396.36			
Street lighting.....	506.00	1,387.00	560.00	1,310.00	413.33
Merchandise.....					
Miscellaneous.....	1.04	640.63	.63	77.68	202.96
Total earnings.....	3,847.71	15,211.87	1,615.69	6,248.73	2,061.19
<b>EXPENSES</b>					
Power purchased.....	3,546.40	10,504.92	1,117.54	3,840.68	1,752.16
Substation operation.....					
Substation maintenance.....					
Distribution system, operation and maintenance.....	143.77	481.89	8.79	77.50	194.61
Line transformer maintenance.....					
Meter maintenance.....					
Consumers' Premises expenses.....					
Street lighting, operation and main- tenance.....	11.22	184.86		32.87	8.90
Promotion of business.....					
Billing and collecting.....					
General office, salaries and expenses.....	424.21	923.67	51.30	391.66	150.91
Undistributed expenses.....					
Truck operation and maintenance.....		264.57			
Interest.....	226.01	1,081.56	384.01	702.66	51.10
Sinking fund and principal payments on debentures.....	430.14	665.28	420.27	339.78	
Depreciation.....	357.00	773.00	160.00	380.00	
Other reserves.....					
Total operating costs and fixed charges.....	5,138.75	14,879.75	2,141.91	5,765.15	2,157.68
Net surplus.....		332.12		483.58	
Net loss.....	1,291.04		526.22		96.49
<b>NUMBER OF CONSUMERS</b>					
Domestic service.....	179	301	27	120	48
Commercial light service.....	24	102	8	44	21
Power service.....		13			
Total.....	203	416	35	164	69

\*4 2-3 months' operation.

z10 months operation.

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1931

Shelburne 1,138	South- ampton z 1,700	Stayner 949	Sunder- land P.V.	Tara 455	Teeswater 835	Thornton P.V.	Tottenham 538
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
5,511.37	7,234.09	3,998.71	2,079.71	2,937.84	4,470.92	1,290.02	3,143.28
3,585.26	3,487.26	2,687.23	1,850.59	1,723.28	2,317.54	625.17	2,324.55
1,538.13	3,282.63	2,930.17	79.44	936.07	1,103.08	292.76	495.12
572.89	1,211.54				120.00		175.30
960.00	1,546.74	1,022.00	612.00	1,340.00	1,460.00	845.00	1,225.08
284.32	146.54	392.57	38.17		152.17	8.22	
12,451.97	16,908.80	11,030.68	4,659.91	6,937.19	9,623.71	3,061.17	7,363.33
9,673.21	7,560.38	8,245.92	3,638.45	3,251.84	6,013.90	1,742.93	5,136.81
614.68	1,059.85	1,001.54	331.72	253.54	193.35	54.78	377.92
	181.68						
2.50	109.10	37.32	105.81	33.40	40.30	10.57	44.88
532.09	648.52						
63.76	122.08	547.67	316.72	418.82	601.05	103.10	177.85
	188.99						
	11.51						
419.09	1,474.34	254.49	217.98	451.36	997.90	431.57	469.86
1,196.52	914.83	966.12	285.41	847.07	998.74	378.30	346.39
851.00	523.00	720.00	253.00	489.00	617.00	283.00	376.00
13,352.85	12,794.28	11,773.06	5,149.09	5,745.03	9,462.24	3,004.25	6,929.71
	4,114.52			1,192.16	161.47	56.92	433.62
900.88		742.38	489.18				
289	393	232	103	126	208	51	118
93	85	74	43	40	55	15	51
10	13	11	2	4	9	2	6
392	491	317	148	170	272	68	175

## STATEMENT

## Detailed Operating Reports of Electrical Departments of

GEORGIAN BAY  
SYSTEM—Continued

Municipality.....	Uxbridge	Victoria Harbor	Walker-ton*	Waubau-shene P.V.	Wiar-ton†
Population.....	1,482	950	2,280		1,880
EARNINGS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	7,488.43	2,675.12	11,282.58	1,947.47	5,983.06
Commercial light service.....	3,482.29	876.96	6,620.66	503.16	4,222.20
Commercial power service.....	1,113.30	46.35	3,833.27	550.28	1,177.57
Municipal power.....		115.48	539.62	86.29	1,550.73
Street lighting.....	1,548.00	702.00	2,142.25	349.33	1,399.00
Merchandise.....			176.54		
Miscellaneous.....	400.00		279.47	21.50	
Total earnings.....	14,032.02	4,415.91	24,874.39	3,458.03	14,332.56
EXPENSES					
Power purchased.....	10,033.89	3,193.89	13,199.95	2,087.28	7,641.84
Substation operation.....					
Substation maintenance.....					
Distribution system, operation and maintenance.....	588.37	97.03	1,001.80	148.07	579.13
Line transformer maintenance.....			169.26		
Meter maintenance.....			241.48		
Consumers' premises expenses.....					
Street lighting, operation and maintenance.....	172.72	101.86	129.93	62.26	51.61
Promotion of business.....					
Billing and collecting.....			1,411.12		562.18
General office, salaries and expenses.....	906.88	349.50	763.35	396.48	83.77
Undistributed expenses.....			114.79		27.93
Truck operation and maintenance.....			226.54		45.19
Interest.....	859.90	127.73	3,010.79	78.55	1,426.34
Sinking fund and principal payments on debentures.....	866.56	416.17	1,746.51	228.02	846.79
Depreciation.....	610.00	358.00	1,066.00	232.00	451.04
Other reserves.....					
Total operating costs and fixed charges.....	14,038.32	4,644.18	23,081.52	3,232.66	11,715.82
Net surplus.....			1,792.87	225.37	2,616.74
Net loss.....	6.30	228.27			
NUMBER OF CONSUMERS					
Domestic service.....	341	157	524	123	353
Commercial light service.....	95	28	135	19	108
Power service.....	12	2	15	6	11
Total.....	448	187	674	148	472

\*10 months' operation.

† 7 months' operation.



“B”—Continued

Hydro Municipalities for Year Ended December 31, 1931

				EASTERN ONTARIO SYSTEM			
Winder- mere 124	Wingham 2,229	Woodville 403	GEORGIAN BAY SYSTEM SUMMARY	Alexandria 2,370	Apple Hill P.V.	Athens 614	Belleville 13,443
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
2,134.94	12,770.36	2,082.21	445,602.43	7,295.93	1,026.30	4,554.74	80,175.95
910.32	7,370.70	1,119.42	243,802.78	3,997.76	814.58	2,308.75	54,926.33
.....	10,158.30	858.42	283,795.04	4,536.41	299.88	1,272.66	39,387.22
.....	410.36	.....	23,101.23	1,680.74	.....	.....	9,908.72
455.00	3,597.00	500.00	98,173.66	2,640.00	466.78	1,525.00	11,387.06
.....	409.98	.....	1,720.03	.....	.....	.....	477.11
656.82	414.22	277.43	19,007.65	391.19	.....	.....	2,412.10
4,157.08	35,130.92	4,837.48	1,115,202.82	20,542.03	2,607.54	9,661.15	198,674.49
.....	.....	.....	.....	.....	.....	.....	.....
2,848.11	17,151.52	3,113.57	822,982.96	12,320.05	1,603.40	4,137.54	113,319.99
.....	1,933.59	.....	8,771.41	.....	.....	.....	.....
.....	.....	.....	472.25	.....	.....	.....	659.65
265.75	2,033.62	371.90	55,130.42	1,330.17	41.05	163.46	5,750.72
.....	.....	.....	1,734.54	.....	.....	.....	375.29
.....	.....	.....	5,122.22	.....	.....	.....	1,772.83
.....	.....	.....	.....	.....	.....	.....	822.26
31.08	172.83	51.02	11,904.89	280.79	59.47	157.24	1,527.26
.....	.....	.....	1,179.80	.....	.....	.....	146.15
.....	660.04	.....	22,603.31	.....	.....	.....	3,904.43
147.66	1,066.36	272.90	42,504.54	1,528.25	279.36	191.41	7,669.19
.....	488.71	.....	9,850.20	.....	.....	.....	1,798.49
.....	122.58	.....	3,722.27	.....	.....	.....	1,290.49
612.60	2,812.45	198.54	48,556.45	1,787.76	261.55	879.53	4,172.98
.....	3,537.94	207.47	58,994.83	2,484.87	270.52	446.90	6,000.00
251.88	2,537.00	203.00	62,450.70	1,210.00	150.00	400.00	4,078.00
.....	.....	.....	.....	.....	.....	.....	.....
4,157.08	32,516.64	4,418.40	1,155,980.79	20,941.89	2,665.35	6,376.08	153,287.73
.....	2,614.28	419.08	.....	.....	.....	3,285.07	45,386.76
.....	.....	.....	40,777.97	399.86	57.81	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
44	552	103	21,444	320	43	130	3,046
9	161	30	5,094	93	18	47	513
.....	29	3	729	15	1	1	100
53	742	136	27,267	428	62	178	3,659

## STATEMENT

## Detailed Operating Reports of Electrical Departments of

EASTERN ONTARIO  
SYSTEM—Continued

Municipality.....	Bloomfield	Brighton	Brockville	Cardinal	Carleton Place
Population.....	637	1,343	9,432	1,249	4,278
EARNINGS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	2,724.65	10,350.31	41,002.20	4,967.33	19,177.90
Commercial light service.....	849.08	4,869.22	24,841.17	1,808.04	8,851.99
Commercial power service.....	2,224.56	3,283.45	37,834.89	569.58	25,576.40
Municipal power.....			6,456.33		2,104.20
Street lighting.....	720.00	1,644.00	8,643.50	1,322.01	4,335.00
Merchandise.....					
Miscellaneous.....	148.85		6,601.80		1,082.07
Total earnings.....	6,667.14	20,146.98	125,379.89	8,666.96	61,127.56
EXPENSES					
Power purchased.....	5,148.18	9,937.81	64,480.59	4,024.66	34,900.58
Substation operation.....			5,172.10		
Substation maintenance.....			496.04		38.51
Distribution system, operation and maintenance.....	111.64	1,796.49	3,335.46	647.71	2,093.29
Line transformer maintenance.....		104.76	456.10		80.69
Meter maintenance.....		201.31	2,169.62	8.10	705.87
Consumers' premises expenses.....		55.00			
Street lighting, operation and main- tenance.....	47.33	129.88	1,153.99	205.74	610.24
Promotion of business.....		481.12	244.65		
Billing and collecting.....		943.50	1,278.60		1,541.67
General office, salaries and expenses	300.32	1,730.64	5,707.51	524.50	3,309.74
Undistributed expenses.....		496.18	1,684.17		254.22
Truck operation and maintenance...		151.99	692.44		666.67
Interest.....	500.78	1,163.68	4,405.68	768.80	2,863.34
Sinking fund and principal payments on debentures.....	359.40	776.26	8,953.84	453.64	2,144.61
Depreciation.....	442.00	497.00	7,170.00	258.00	1,765.00
Other reserves.....			2,000.00		
Total operating costs and fixed charges.....	6,909.65	18,435.62	109,400.79	6,891.15	50,974.43
Net surplus.....		1,711.36	15,979.10	1,775.81	10,153.13
Net loss.....	242.51				
NUMBER OF CONSUMERS					
Domestic service.....	152	405	2,452	253	929
Commercial light service.....	25	105	430	52	183
Power service.....	8	11	71	2	20
Total.....	185	521	2,953	307	1,132

\*11 months' operation.

† 6 months' operation.

## "B"—Continued

## Hydro Municipalities for Year Ended December 31, 1931

Chesterville	Deseronto*	Finch	Hastings†	Havelock	Kemptville	Kingston
1,000	1,331	365	709	1,142	1,227	21,616
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
5,215.00	6,733.46	2,145.46	2,488.86	6,616.63	6,882.24	99,385.86
2,304.19	2,759.85	1,634.84	1,084.30	1,936.93	4,093.38	71,799.59
2,055.97	2,103.92	1,008.58	455.00	5,966.77	5,040.38	74,358.66
.....	769.86	.....	.....	.....	.....	10,184.66
1,032.00	1,794.60	558.00	775.75	1,460.00	1,830.00	25,395.00
419.49	230.15	.....	.....	.....	510.21	22.36
494.64	.....	.....	.....	249.17	1,418.19	3,986.40
11,521.29	14,391.84	5,346.88	4,803.91	16,229.50	19,774.40	285,132.53
8,801.91	7,172.66	2,799.33	2,518.98	9,710.46	9,620.72	112,833.75
.....	.....	.....	.....	.....	.....	4,892.64
.....	.....	.....	.....	.....	.....	2,673.03
901.82	727.17	88.90	220.81	961.03	1,840.03	21,632.04
.....	16.31	.....	.....	.....	.....	1,510.06
.....	30.77	.....	.....	.....	.....	4,613.13
.....	.....	.....	.....	.....	.....	2,038.00
142.31	288.00	25.50	48.63	175.57	190.13	4,618.82
.....	.....	.....	.....	.....	.....	33.00
.....	292.28	.....	.....	.....	.....	6,277.34
803.80	1,155.23	220.33	306.17	423.22	1,291.86	9,425.95
.....	191.62	.....	.....	.....	.....	23,427.24
.....	.....	.....	.....	206.51	171.97	2,234.06
214.16	741.32	374.96	577.44	1,278.86	1,656.54	10,640.94
171.51	426.95	226.64	301.19	1,580.26	566.30	11,260.72
551.00	350.00	226.00	190.00	784.00	808.00	17,463.00
.....	.....	.....	.....	.....	.....	15,000.00
11,586.51	11,392.31	3,961.66	4,163.22	15,119.91	16,145.55	250,573.72
.....	2,999.53	1,385.22	640.69	1,109.59	3,628.85	34,558.81
65.22	.....	.....	.....	.....	.....	.....
221	301	76	160	283	305	5,556
57	72	34	50	60	86	866
3	13	1	5	3	7	140
281	386	111	215	346	398	6,562



## STATEMENT

## Detailed Operating Reports of Electrical Departments of

EASTERN ONTARIO  
SYSTEM—Continued

Municipality.....	Lakefield	Lanark	Lancaster	Lindsay	Madoc
Population.....	1,428	592	560	7,161	1,019
EARNINGS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	6,685.57	2,431.42	1,981.95	37,919.62	4,567.37
Commercial light service.....	4,568.63	1,283.96	2,072.54	22,234.74	3,397.84
Commercial power service.....	2,776.71	72.25	1,668.44	25,365.48	1,247.49
Municipal power.....				2,731.15	
Street lighting.....	1,768.00	592.00	1,495.00	8,176.25	1,788.00
Merchandise.....					
Miscellaneous.....	697.08	110.37		3,065.92	
Total earnings.....	16,495.99	4,490.00	7,217.93	99,493.16	11,000.70
EXPENSES					
Power purchased.....	8,212.43	2,698.77	3,910.48	62,697.45	6,943.45
Substation operation.....					
Substation maintenance.....					
Distribution system, operation and maintenance.....	1,637.41	74.75	120.12	3,815.40	698.20
Line transformer maintenance.....				301.24	
Meter maintenance.....				839.15	37.54
Consumers' premises expenses.....				476.61	
Street lighting, operation and maintenance.....	114.15	35.00	69.40	1,051.27	160.44
Promotion of business.....				48.80	
Billing and collecting.....				2,140.43	
General office, salaries and expenses.....	680.49	295.35	327.23	6,510.51	726.97
Undistributed expenses.....				1,622.08	
Truck operation and maintenance.....				682.79	
Interest.....	1,797.20	284.98	579.06	5,789.10	84.71
Sinking fund and principal payments on debentures.....	728.04	413.37	632.90	4,334.51	405.88
Depreciation.....	987.00	228.00	255.00	3,097.00	319.00
Other reserves.....					
Total operating costs and fixed charges.....	14,156.72	4,030.22	5,894.19	93,406.34	9,376.19
Net surplus.....	2,339.27	459.78	1,323.74	6,086.82	1,624.51
Net loss.....					
NUMBER OF CONSUMERS					
Domestic service.....	303	133	78	1,840	257
Commercial light service.....	74	35	43	339	86
Power service.....	8	1	1	77	6
Total.....	385	169	122	2,256	349

“B”—Continued

Hydro Municipalities for Year Ended December 31, 1931

Marmora	Martintown	Maxville	Napanee	Norwood	Omemee	Oshawa
1,013	P.V.	742	2,984	756	489	25,550
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
3,503.63	911.31	3,240.62	28,013.89	4,916.11	2,386.27	162,125.69
1,590.74	992.60	2,110.28	16,972.66	2,796.72	1,219.79	61,246.83
153.01		259.31	12,868.18	3,064.22	303.03	168,533.28
			790.58			5,994.86
1,450.00	300.00	1,426.76	4,245.80	1,575.00	924.00	9,982.05
			332.28			
169.00	85.40		2,655.87	268.13		3,834.65
6,866.38	2,289.31	7,036.97	65,879.26	12,620.18	4,833.09	411,717.36
4,048.57	1,254.08	4,058.98	32,916.49	5,763.77	2,543.87	312,503.17
75.76	33.02	137.31	5,182.68	613.49	444.35	6,914.45
			147.86			580.56
			1,115.07			4,000.74
			27.11			186.49
59.00	48.04	34.26	446.59	56.87	31.80	1,385.60
			1,228.18			21.65
470.62	103.34	353.52	3,684.50	477.97	236.57	10,230.78
			1,934.31			7,858.87
			734.35	190.35		3,425.44
728.01	231.22	543.27	2,762.16	1,839.34	354.59	2,374.26
941.14	292.10	783.82	2,173.54	913.32	676.67	11,000.74
517.00	124.00	464.00	1,318.00	953.00	513.00	10,561.72
						8,128.00
6,840.10	2,085.80	6,375.16	53,670.84	10,808.11	4,800.85	379,172.47
26.28	203.51	661.81	12,208.42	1,812.07	32.24	32,544.89
193	35	140	766	211	127	5,896
48	23	43	188	64	41	513
2		1	34	3	6	101
243	58	184	988	278	174	6,510

## STATEMENT

## Detailed Operating Reports of Electrical Departments of

EASTERN ONTARIO  
SYSTEM—Continued

Municipality.....	Ottawa	Perth	Peterboro'	Picton	Port Hope
Population.....	125,496	3,762	22,487	3,146	4,415
EARNINGS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	368,906.39	22,183.45	113,554.75	21,192.31	28,814.79
Commercial light service.....	160,255.53	14,381.71	63,425.98	11,436.97	15,045.79
Commercial power service.....	68,008.48	12,521.81	86,095.62	7,058.90	25,555.08
Municipal power.....	30,944.01	2,048.86	6,582.90	2,071.95	2,027.80
Street lighting.....	71,652.27	2,112.80	19,376.04	4,359.04	4,602.00
Merchandise.....	.....	1,681.18	.....	1,091.66	.....
Miscellaneous.....	.....	1,079.12	4,713.50	1,155.60	1,073.89
Total earnings.....	699,766.68	56,008.93	293,748.79	48,366.43	77,119.35
EXPENSES					
Power purchased.....	326,916.17	28,705.16	177,856.22	35,828.65	44,193.99
Substation operation.....	20,332.57	360.00	6,480.62	.....	.....
Substation maintenance.....	84.60	.....	700.80	.....	.....
Distribution system, operation and maintenance.....	27,537.23	1,818.24	9,083.86	2,769.35	2,290.47
Line transformer maintenance.....	1,946.59	204.48	549.58	66.00	58.21
Meter maintenance.....	8,741.50	85.58	5,682.40	44.94	1,114.97
Consumers' premises expenses.....	3,200.00	.....	510.00	.....	.....
Street lighting, operation and maintenance.....	27,720.32	391.87	3,836.27	1,078.88	135.36
Promotion of business.....	10,568.90	.....	.....	.....	.....
Billing and collecting.....	42,142.69	1,353.27	6,686.73	1,093.36	1,627.18
General office, salaries and expenses.....	20,920.67	2,570.46	7,658.23	3,547.00	4,209.16
Undistributed expenses.....	38,439.61	759.31	5,786.58	340.66	1,208.38
Truck operation and maintenance.....	1,562.14	748.57	3,521.17	297.14	456.36
Interest.....	41,259.92	2,944.98	26,290.99	.....	2,326.28
Sinking fund and principal payments on debentures.....	20,553.79	1,619.04	14,263.54	.....	2,569.50
Depreciation.....	63,121.00	2,843.00	14,713.00	1,763.00	1,682.00
Other reserves.....	.....	.....	.....	.....	.....
Total operating costs and fixed charges.....	655,137.70	44,403.96	283,619.99	46,828.98	61,871.86
Net surplus.....	44,628.98	11,604.97	10,128.80	1,537.45	15,247.49
Net loss.....	.....	.....	.....	.....	.....
NUMBER OF CONSUMERS					
Domestic service.....	12,178	808	5,197	966	1,220
Commercial light service.....	1,392	186	759	188	195
Power service.....	222	25	155	44	48
Total.....	13,792	1,091	6,111	1,198	1,463



## "B"—Continued

## Hydro Municipalities for Year Ended December 31, 1931

Prescott 2,940	Richmond 367	Russell P.V.	Smiths Falls 7,452	Stirling 822	Tweed 1,206	Warkworth P.V.
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
16,143.53	1,647.50	2,682.04	40,716.75	5,822.08	6,675.53	2,089.84
9,074.16	1,568.52	1,442.38	15,712.64	3,940.64	5,231.09	1,520.25
4,097.24		558.52	24,360.33	2,303.95	4,426.86	
1,559.68			2,276.91	423.06	158.12	
3,425.00	552.00	1,012.00	7,696.83	968.04	1,840.00	649.50
				177.59	200.15	
188.51			2,070.40	398.94		143.84
34,488.12	3,768.02	5,694.94	92,833.86	14,034.28	18,531.75	4,403.43
23,110.14	1,915.77	3,185.81	43,856.17	7,808.01	9,884.26	2,915.93
1,162.00			1,404.02	180.00		
			700.18			
2,339.56	85.10	134.76	4,309.82	1,071.45	704.98	186.31
			63.21		6.27	
80.63			1,009.29	24.66	239.37	
578.50	16.90	170.81	834.90	220.61	303.55	38.44
			22.51			
1,012.13			3,251.84	550.00	794.62	
2,296.06	178.85	241.07	3,854.41	990.63	1,233.26	185.35
244.61			1,237.13		530.88	
			749.38	143.98		
30.55	378.75	451.86	5,955.38	14.41	904.31	595.21
333.64	198.51	374.83	11,107.74		589.96	197.37
2,456.00	172.00	258.00	5,230.00	935.00	397.00	194.00
33,643.82	2,945.88	4,817.14	83,585.98	11,938.75	15,588.46	4,312.61
844.30	822.14	877.80	9,247.88	2,095.53	2,943.29	90.82
653	45	106	1,692	270	238	100
167	25	35	269	84	81	42
21		1	45	11	11	
841	70	142	2,006	365	330	142

## STATEMENT

## Detailed Operating Reports of Electrical Departments of

EASTERN ONTARIO  
SYSTEM—Concluded

Municipality.....	Wellington 900	Whitby	Williams- burg P.V.	Winchester 970	EASTERN ONTARIO SYSTEM SUMMARY
Population.....		5,463			
EARNINGS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	4,467.61	19,464.20	1,893.40	5,837.42	1,221,517.86
Commercial light service.....	1,903.99	9,948.09	865.49	3,127.61	628,248.15
Commercial power service.....	2,895.63	12,785.10	219.39	1,171.25	674,343.89
Municipal power.....		2,209.59			90,923.98
Street lighting.....	1,070.04	3,311.42	204.00	1,062.00	223,144.54
Merchandise.....				172.87	5,315.05
Miscellaneous.....	302.57	1,014.25	72.70	400.00	40,284.15
Total earnings.....	10,639.84	48,732.65	3,254.98	11,771.15	2,883,777.62
EXPENSES					
Power purchased.....	7,459.83	31,519.45	2,044.43	8,131.83	1,606,213.94
Substation operation.....		167.87			40,151.82
Substation maintenance.....					5,352.81
Distribution system, operation and maintenance.....	801.30	3,268.50	78.43	691.17	118,559.26
Line transformer maintenance.....		53.60			6,520.81
Meter maintenance.....		79.38			32,596.85
Consumers' premises expenses.....					7,315.47
Street lighting, operation and main- tenance.....	246.60	1,038.24	46.71	153.26	49,964.54
Promotion of business.....					11,566.78
Billing and collecting.....		1,448.86			87,767.89
General office, salaries and expenses.....	673.17	1,413.97	224.72	779.91	107,570.34
Undistributed expenses.....		517.38			83,898.29
Truck operation and maintenance.....		236.81			17,201.43
Interest.....	836.82	2,444.10	41.21	417.38	143,174.85
Sinking fund and principal payments on debentures.....	564.27	3,160.01	181.55	342.04	115,336.41
Depreciation.....	683.00	2,602.00	126.00	568.00	150,988.00
Other reserves.....					17,000.00
Total operating costs and fixed charges.....	11,264.99	47,950.17	2,743.05	11,083.59	2,601,179.49
Net surplus.....		782.48	511.93	687.56	282,598.13
Net loss.....	625.15				
NUMBER OF CONSUMERS					
Domestic service.....	281	810	55	270	49,572
Commercial light service.....	61	159	22	65	7,918
Power service.....	8	15	1	2	1,250
Total.....	350	984	78	337	58,740

“B”—Concluded

Hydro Municipalities for Year Ended December 31, 1931

THUNDER BAY  
SYSTEM

Fort William 24,635	Nipigon P.V.	Port Arthur 20,092	THUNDER BAY SYSTEM SUMMARY	ALL SYSTEMS GRAND SUMMARY
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
210,171.46	2,238.32	108,984.41	321,394.19	11,478,964.41
69,718.74	1,814.49	56,341.94	127,875.17	6,278,074.62
40,273.96	.....	775,282.19	815,556.15	9,568,403.74
21,011.97	.....	36,991.62	58,003.59	1,967,118.54
18,697.29	576.00	16,451.64	35,724.93	1,807,973.41
.....	.....	.....	.....	29,446.38
.....	.....	25,029.16	25,029.16	527,583.78
359,873.42	4,628.81	1,019,080.96	1,383,583.19	31,657,564.88
246,513.43	1,774.63	766,404.23	1,014,692.29	18,409,304.24
6,248.19	.....	20,345.71	26,593.90	514,356.35
1,051.15	.....	3,581.05	4,632.20	303,536.11
11,295.72	399.61	18,144.37	29,839.70	1,031,507.56
661.12	.....	1,819.26	2,480.38	97,638.56
8,700.88	55.30	4,973.05	13,729.23	293,082.92
39.65	.....	.....	39.65	384,404.66
7,033.78	9.30	5,149.87	12,192.95	378,528.64
.....	.....	5,347.66	5,347.66	260,436.05
6,019.75	.....	10,223.00	16,242.75	830,712.29
9,220.89	520.01	9,722.82	19,463.72	949,930.07
7,294.03	.....	12,146.52	19,440.55	546,004.35
1,966.70	.....	1,685.09	3,651.79	107,918.93
19,688.05	409.75	20,494.86	40,592.66	2,488,220.49
12,241.58	385.62	9,027.90	21,655.10	2,081,348.30
10,685.00	402.00	27,165.24	38,252.24	1,773,500.35
.....	.....	.....	.....	19,611.34
348,659.92	3,956.22	916,230.63	1,268,846.77	30,470,041.21
11,213.50	672.59	102,850.33	114,736.42	1,187,523.67
.....	.....	.....	.....	.....
5,494	125	4,163	9,782	438,083
890	39	717	1,646	72,119
98	.....	93	191	11,995
6,482	164	4,973	11,619	522,197



## STATEMENT "C"

Street Lighting Installation in Hydro Municipalities, December 31, 1931, showing  
Rate per Lamp, Cost to Municipality per Annum, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps		Rate per lamp per annum	Total cost to municipality per annum	Cost per capita
					\$ c.	\$ c.	\$ c.
Acton.....	1,951	{ 129 61 1 3	80 c.p. 100 watt 150 watt 300 watt	<i>s</i> <i>m</i> <i>m</i> <i>m</i>	9.00 9.00 12.00 20.00	1,795 50	0.92
Agincourt.....		56	100 watt	<i>m</i>	13.00	728.00	**
Ailsa Craig....	516	{ 1 56	200 watt 100 watt	<i>s</i> <i>m</i>	18.00 10.00	578.00	1.12
Alexandria....	2,370	{ 95 41	100 watt 200 watt	<i>m</i> <i>m</i>	17.00 25.00	2,640.00	1.11
Alliston.....	1,364	{ 102 13	100 c.p. 100 watt	<i>s</i> <i>m</i>	18.00 18.00	2,058.00	1.51
Alvinston.....	657	{ 6 84	200 c.p. 100 watt	<i>s</i> <i>m</i>	29.00 20.00	1,854.00	2.82
Amherstburg...	3,083	{ 81 9 22 12	100 c.p. 250 c.p. 200 watt 300 watt	<i>s</i> <i>s</i> <i>m</i> <i>m</i>	12.00 26.00 20.00 30.00	2,001.04	††
Ancaster Twp.....		{ 25 38	100 watt 150 watt	<i>m</i> <i>m</i>	11.50 14.00	819.50	**
Apple Hill.....		27	100 watt	<i>m</i>	17.00	466.78	**
Arkona.....	383	48	100 watt	<i>m</i>	20.00	960.00	2.51
Arthur.....	954	{ 82 7	100 watt 200 watt	<i>m</i> <i>m</i>	19.00 32.00	1,782.00	1.87
Athens.....	614	{ 40 23	100 watt 200 watt	<i>m</i> <i>m</i>	18.00 35.00	1,525.00	2.48
Aylmer.....	1,996	{ 163 24 1	100 watt 300 watt 1 traffic Lt.	<i>m</i> <i>m</i> <i>m</i>	10.00 25.00 40.00	2,270.00	1.14
Ayr.....	776	{ 92 3	100 watt 500 watt	<i>m</i> <i>m</i>	10.00 36.00	1,028.00	1.32
Baden.....		65	100 watt	<i>m</i>	8.00	520.00	**
Barrie.....	7,166	{ 461 15 41 23	100 watt 100 watt 200 watt 300 watt	<i>s</i> <i>m</i> <i>m</i> <i>m</i>	8.00 15.00 18.00 22.00	5,145.00	0.72
Beachville.....		47	100 watt	<i>m</i>	11.00	517 00	**

\*\*Population not shown in Government statistics. *s* Series system. *m* Multiple system.

††Part of cost paid direct in form of debenture charges.

## STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1931, showing  
Rate per Lamp, Cost to Municipality per Annum, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps		Rate per lamp per annum	Total cost to municipality per annum	Cost per capita
					\$ c.	\$ c.	\$ c.
Beaverton.....	988	{ 9 12 95	100 watt 100 watt 100 watt	<i>m</i> <i>m</i> <i>m</i>	6.00 6.00 8.00	1,031.01	1.04
Beeton.....	561	{ 6 65 14	500 watt 100 watt 100 watt	<i>m</i> <i>s</i> <i>m</i>	30.00 15.00 15.00	1,185.00	2.11
Belle River....	715	76	100 watt	<i>m</i>	11.00	827.75	1.16
Belleville.....	13,443	{ 532 22 52 102	100 c.p. 250 c.p. 1,000 c.p. 300 watt	<i>s</i> <i>s</i> <i>s</i> <i>m</i>	10.00 30.00 54.00 35.00	11,387.06	0.85
Blenheim.....	1,630	{ 163 3 12	150 c.p. 400 c.p. 600 c.p.	<i>s</i> <i>s</i> <i>s</i>	12.00 28.00 37.00	2,414.67	††
Bloomfield.....	637	60	80 c.p.	<i>s</i>	12.00	720.00	1.13
Blyth.....	621	100	100 watt	<i>m</i>	13.00	1,300.00	2.09
Bolton.....	609	{ 51 23	100 watt 200 watt	<i>m</i> <i>m</i>	12.00 21.00	1,003.75	1.45
Bothwell.....	575	{ 66 21	100 watt 300 watt	<i>m</i> <i>m</i>	11.00 27.00	1,293.00	2.25
Bradford.....	933	{ 60 7	150 c.p. 100 watt	<i>s</i> <i>m</i>	18.00 18.00	1,206.00	1.29
Brampton.....	5,137	{ 643 2	100 watt 500 watt	<i>m</i> <i>m</i>	8.00 35.00	5,191.35	1.01
Brantford.....	30,103	{ 3,490 10 12 2 20 149	100 watt 150 watt 200 watt 500 watt 750 watt 1,500 c.p.	<i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>s</i>	7.50 8.50 11.00 45.00 46.00 45.00	33,996.43	††
Brantford Twp.....		364	100 watt	<i>m</i>	12.00	4,244.00	**
Brechin.....	Mara Twp. Thorah "	{ 2 4 26	100 watt 100 watt 100 watt	<i>m</i> <i>m</i> <i>m</i>	18.00 18.00 18.00	576.00	**
Bridgeport.....		57	100 watt	<i>m</i>	10.00	570.00	**
Brigden.....		{ 44 22	100 watt 200 watt	<i>m</i> <i>m</i>	14.00 25.00	1,162.63	**
Brighton.....	1,343	137	100 c.p.	<i>s</i>	12.00	1,644.00	1.22

\*\*Population not shown in Government statistics. *s* Series system. *m* Multiple system.  
††Part of cost paid direct in form of debenture charges.

## STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1931, showing  
Rate per Lamp, Cost to Municipality per Annum, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps		Rate per lamp per annum	Total cost to municipality per annum	Cost per capita
					\$ c.	\$ c.	\$ c.
Brockville.....	9,432	{ 586	100 c.p.	<i>s</i>	11.00	8,643.50	0.92
		{ 15	1-Lt. stds.	<i>m</i>	17.00		
		{ 35	3-Lt. stds.	<i>m</i>	21.00		
		{ 49	5-Lt. stds.	<i>m</i>	24.00		
		{ 6	300 watt	<i>m</i>	24.00		
Brussels.....	725	{ 79	100 watt	<i>m</i>	12.00	1,272.00	1.75
		{ 18	200 watt	<i>m</i>	18.00		
Burford.....		67	100 watt	<i>m</i>	12.00	804.00	**
Burgessville.....		24	100 watt	<i>m</i>	13.00	312.00	**
Caledonia.....	1,456	{ 157	100 watt	<i>m</i>	8.00	1,607.91	1.10
		{ 7	100 watt	<i>m</i>	13.00		
		{ 20	200 watt	<i>m</i>	13.00		
Campbellville.....		19	100 watt	<i>m</i>	24.00	456.00	**
Cannington....	849	{ 67	100 watt	<i>m</i>	13.00	956.16	1.13
		{ 3	500 watt	<i>m</i>	32.00		
Cardinal.....	1,249	{ 18	100 watt	<i>m</i>	20.00	1,322.01	1.06
		{ 36	200 watt	<i>m</i>	27.00		
Carleton Place..	4,278	{ 84	60 watt	<i>m</i>	12.00	4,335.00	1.01
		{ 101	200 watt	<i>m</i>	18.00		
		{ 66	300 watt	<i>m</i>	23.00		
Cayuga.....	661	77	100 watt	<i>m</i>	20.00	1,539.96	2.33
Chatham.....	16,441	{ 712	150 c.p.	<i>s</i>	13.00	18,513.75	††
		{ 32	250 c.p.	<i>s</i>	16.00		
		{ 30	600 c.p.	<i>s</i>	31.00		
		{ 134	1,000 c.p.	<i>s</i>	38.00		
		{ 75	600 c.p.	<i>s</i>	30.00		
		{ 36	150 c.p.	<i>s</i>	12.00		
		{ 2	250 Fl. Lt. c.p.	<i>s</i>	24.00		
Chatsworth....	251	41	100 watt	<i>m</i>	11.00	451.00	1.80
Chesley.....	1,702	114	100 watt	<i>s</i>	14.00	1,596.00	0.94
Chesterville....	1,000	86	100 watt	<i>m</i>	12.00	1,032.00	1.03
Chippawa.....	1,222	91	100 watt	<i>m</i>	12.00	1,080.00	0.88
Clifford.....	496	61	100 watt	<i>m</i>	14.00	833.00	1.68
Clinton.....	1,911	{ 159	150 c.p.	<i>s</i>	11.00	1,963.96	1.03
		{ 11	100 watt	<i>m</i>	11.00		
		{ 1	500 watt	<i>m</i>	55.00		
Coldwater.....	563	{ 6	60 watt	<i>m</i>	9.00	571.00	1.01
		{ 47	100 watt	<i>m</i>	11.00		
Collingwood...	6,027	422	150 c.p.	<i>s</i>	8.00	3,369.65	0.56

\*\*Population not shown in Government statistics. *s* Series system. *m* Multiple system.

††Part of cost paid direct in form of debenture charges.



## STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1931, showing  
Rate per Lamp, Cost to Municipality per Annum, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps		Rate per lamp per annum	Total cost to municipality per annum	Cost per capita
					\$ c.	\$ c.	\$ c.
Comber.....		{ 43 12	100 watt 200 watt	<i>m</i> <i>m</i>	12.00 18.00	732.00	**
Cookstown.....		56	150 c.p.	<i>s</i>	17.00	952.00	**
Cottam.....		30	100 watt	<i>m</i>	15.00	445.00	**
Courtright.....	370	43	100 watt	<i>m</i>	18.00	774.00	2.09
Creemore.....	598	59	100 watt	<i>m</i>	10.00	590.16	0.99
Dashwood.....		41	100 watt	<i>m</i>	12.00	492.00	**
Delaware.....		21	100 watt	<i>m</i>	12.00	252.00	**
Deseronto.....	1,331	124	100 watt	<i>m</i>	16.00	1,794.60	†
Dorchester.....		59	100 watt	<i>m</i>	11.00	640.56	**
Drayton.....	559	75	100 watt	<i>m</i>	10.00	750.00	1.34
Dresden.....	1,403	{ 129 15	100 c.p. 50 watt	<i>s</i> <i>m</i>	14.00 3.48	1,867.04	1.33
Drumbo.....		{ 39 1	100 watt 250 watt	<i>m</i> <i>m</i>	13.00 31.00	538.00	**
Dublin.....		50	100 watt	<i>m</i>	15.00	750.00	**
Dundalk.....	659	{ 58 20	100 watt 200 watt	<i>m</i> <i>m</i>	10.00 16.00	900.00	1.37
Dundas.....	5,137	{ 304 12 54	100 watt 200 watt 500 watt	<i>m</i> <i>m</i> <i>m</i>	12.00 16.00 46.00	6,283.15	1.22
Dunnville.....	3,412	{ 252 27	100 watt 600 watt	<i>m</i> <i>m</i>	11.00 45.00	3,964.28	1.16
Durham.....	1,744	{ 105 6	150 c.p. 375 c.p.	<i>s</i> <i>s</i>	16.00 24.00	1,802.60	1.03
Dutton.....	801	106	100 watt	<i>m</i>	9.00	946.50	1.18
East Windsor..	16,203	{ 387 136 283	100 watt 200 watt 300 watt	<i>m</i> <i>m</i> <i>m</i>	8.00 14.00 20.00	9,003.57	††
Elmira.....	2,940	{ 190 8 1	100 watt 200 watt 1,000 watt	<i>m</i> <i>m</i> <i>m</i>	9.00 12.00 40.00	1,846.00	0.63
Elmvale.....		60	100 watt	<i>m</i>	11.00	660.00	**
Elmwood.....		23	150 watt	<i>m</i>	21.00	483.00	**

\*\*Population not shown in Government statistics. *s* Series system. *m* Multiple system.

†11 months' operation.

††Part of cost paid direct in form of debenture charges.

## STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1931, showing  
Rate per Lamp, Cost to Municipality per Annum, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps		Rate per lamp per annum	Total cost to municipality per annum	Cost per capita
					\$ c.	\$ c.	\$ c.
Elora .....	1,306	{ 93 15	100 watt 200 watt	<i>m</i> <i>m</i>	16.00 22.00	1,678.32	1.29
Embro .....	443	54	100 watt	<i>m</i>	13.00	702.00	1.58
Erieau .....	202	21	100 watt	<i>m</i>	18.00	373.50	1.85
Essex .....	1,880	{ 122 28 4 61 1	60 watt 100 watt 200 watt 300 watt 500 watt	<i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i>	11.00 11.00 22.00 26.00 30.00	3,249.44	1.73
Etobicoke Twp. ....		{ 951 22	100 watt 100 watt	<i>m</i> <i>m</i>	13.00 17.00	12,672.81	**
Exeter .....	1,606	{ 165 23	100 watt 200 watt	<i>m</i> <i>m</i>	9.00 18.00	1,899.00	1.18
Fergus .....	2,465	{ 131 30	100 watt 150 watt	<i>m</i> <i>m</i>	16.00 18.50	2,629.68	1.07
Finch .....	365	31	100 watt	<i>m</i>	18.00	558.00	1.53
Flesherton .....	448	{ 54 1	100 watt 300 watt	<i>m</i> <i>s</i>	10.00 25.00	543.00	1.21
Fonthill .....	833	70	100 watt	<i>m</i>	15.00	1,050.00	1.26
Forest .....	1,405	{ 123 131	100 watt 60 watt	<i>m</i> <i>m</i>	11.00 7.00	2,321.00	1.65
			Station Platform.		51.00		
Fort William...	24,635	{ 212 73 572 14 4 2 48	1,000 c.p. 600 c.p. 100 c.p. 300 c.p. 100 c.p. 250 c.p. Arcs	<i>s</i> <i>s</i> <i>s</i> <i>s</i> <i>s</i> <i>s</i> <i>m</i>	45.00 30.00 8.50 25.00 9.60 20.00 45.00	18,697.29	0.76
Galt .....	13,752	{ 934 316 100 152 74	100 c.p. 100 watt 200 watt 300 watt 500 watt	<i>s</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i>	9.00 12.00 20.00 35.00 40.00	22,502.00	1.64
Georgetown...	1,997	{ 171 1 16	100 watt 300 watt 100 watt	<i>m</i> <i>m</i> <i>m</i>	11.00 19.00 13.00	2,099.81	†
Glencoe .....	779	{ 19 111	200 c.p. 100 watt	<i>s</i> <i>m</i>	20.00 14.00	1,934.04	2.48

\*\*Population not shown in Government statistics.

*s* Series system.

*m* Multiple system.

†Includes Glen Williams.

## STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1931, showing  
Rate per Lamp, Cost to Municipality per Annum, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Rate per lamp per annum	Total cost to municipality per annum	Cost per capita
				\$ c.	\$ c.	\$ c.
Goderich.....	4,913	{ 321	100 c.p. s	9.00	3,796.00	0.77
		{ 4	100 c.p. s	9.00		
		{ 2	100 c.p. s	9.00		
		{ 16	3-Lt. stds. m	35.00		
		{ 8	200 watt m	25.00		
		{ 8	100 watt m	15.00		
Grand Valley..	590	{ 12	200 watt m	24.00	928.00	1.57
		{ 40	100 watt m	16.00		
Granton.....		37	100 watt m	10.00	370.00	**
Gravenhurst...	1,822	{ 141	80 watt s	10.00	2,116.72	1.16
		{ 7	100 watt s	11.00		
		{ 24	100 watt m	10.00		
		{ 16	300 watt m	35.00		
Guelph.....	20,393	{ 1,399	100 watt m	10.00	23,279.87	1.14
		{ 39	200 watt m	12.50		
		{ 9	500 watt m	25.00		
		{ 138	500 watt 220 m	34.00		
		{ 34	750 watt } v. m	43.00		
		{ 52	1,000 watt m	46.50		
		{ 1	Airport Beacon m	60.00		
		{ 18	60 watt m	4.00		
Hagersville....	1,265	{ 121	100 watt m	12.00	1,732.00	1.37
		{ 14	300 watt m	20.00		
Hamilton.....	144,529	{ 8,417	100 watt m	7.50	106,112.74	0.73
		{ 1,362	200 watt m	11.00		
		{ 72	300 watt m	30.00		
		{ 811	500 watt m	34.50		
		{ 65	750 watt m	55.00		
		{ 1	1,000 watt m	70.00		
Hanover.....	2,920	{ 91	100 c.p. s	27.00	3,488.16	1.19
		{ 16	250 c.p. s	32.00		
		{ 5	100 watt m	27.00		
		{ 12	200 watt m	32.00		
Harriston.....	1,325	{ 76	66 c.p. s	11.00	1,199.00	0.90
		{ 4	100 watt m	11.00		
		{ 29	200 watt m	11.00		
Harrow.....	830	71	200 watt m	16.50	877.93	1.06
Hastings.....	709	60	100 watt m	29.00	775.75	†
Havelock.....	1,142	{ 60	100 c.p. s	16.00	1,460.00	1.28
		{ 20	250 c.p. s	25.00		
Hensall.....	727	76	100 watt m	12.00	925.00	1.27

\*\*Population not shown in Government statistics.

s Series system.

m Multiple system.

†6 mos. operation.



STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1931, showing Rate per Lamp, Cost to Municipality per Annum, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps		Rate per lamp per annum	Total cost to municipality per annum	Cost per capita
					\$ c.	\$ c.	\$ c.
Hespeler.....	2,769	{ 90	150 c.p.	s	11.00	2,775.00	1.00
		{ 41	250 c.p.	s	16.00		
		{ 12	400 c.p.	s	30.00		
		{ 54	150 watt	m	10.00		
		{ 7	300 watt	m	35.00		
		{ 3	400 watt	m	20.00		
Highgate.....	315	51	100 watt	m	11.00	559.16	1.77
Holstein.....		14	100 watt	m	35.00	490.00	**
Humberstone..	1,926	111	100 watt	m	12.00	1,299.00	0.67
Huntsville.....	2,903	{ 43	250 c.p.	s	22.00	2,512.00	0.87
		{ 32	150 c.p.	s	18.00		
		{ 20	100 c.p.	s	14.00		
		{ 60	75 watt	m	10.00		
		{ 11	50 watt	m	10.00		
Ingersoll.....	5,150	{ 342	100 c.p.	s	11.00	4,675.87	††
		{ 2	600 c.p.	s	28.00		
		{ 2	1,000 c.p.	s	25.00		
		{ 26	1,000 c.p.	s	35.00		
Jarvis.....	479	70	100 watt	m	12.00	840.00	1.76
Kemptville....	1,227	{ 90	100 watt	m	20.00	1,830.00	1.49
		{ 1	Floodlight	m	30.00		
Kincardine....	2,218	{ 140	150 c.p.	s	20.00	3,977.08	1.79
		{ 20	100 watt	m	15.00		
		{ 33	200 watt	m	25.00		
		{ 2	1,000 watt	m	85.00		
Kingston.....	21,616	{ 234	600 c.p.	s	54.70	25,395.00	1.17
		{ 283	600 c.p.	s	43.20		
		{ 78	100 c.p.	s	19.60		
Kingsville....	2,200	{ 113	250 c.p.	s	18.00	4,071.04	††
		{ 25	600 c.p.	s	29.00		
		{ 110	100 watt	m	12.00		
Kirkfield.....		23	100 watt	m	20.00	460.93	**
Kitchener.....	30,274	{ 44	16 c.p.	s	7.00	30,728.12	††
		{ 2,051	80 c.p.	s	8.00		
		{ 57	150 c.p.	s	8.00		
		{ 34	250 c.p.	s	13.00		
		{ 2	600 c.p.	s	25.00		
		{ 18	1,000 c.p.	s	25.00		
		{ 360	200 watt	m	15.00		
		{ 30	300 watt	m	15.00		
		{ 69	300 watt	m	17.50		
		{ 78	300 watt	m	20.00		
		{ 175	500 watt	m	25.00		
Lakefield.....	1,428	104	100 watt	m	17.00	1,768.00	1.24

\*\*Population not shown in Government statistics. s Series system. m Multiple system.  
††Part of cost paid direct in form of debenture charges.

## STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1931, showing  
Rate per Lamp, Cost to Municipality per Annum, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps		Rate per lamp per annum	Total cost to municipality per annum	Cost per capita
					\$ c.	\$ c.	\$ c.
Lambeth.....		{ 34 2 1	100 watt 100 watt 200 watt	<i>m</i> <i>m</i> <i>m</i>	12.00 12.00 21.00	441.00	**
Lanark.....	592	37	100 watt	<i>m</i>	16.00	592.00	1.00
Lancaster.....	560	41	100 watt	<i>m</i>	36.50	1,495.00	2.67
La Salle.....	574	66	100 watt	<i>m</i>	15.00	995.50	1.73
Leamington....	5,313	{ 141 38 167 24	400 c.p. 600 c.p. 100 watt 200 watt	<i>s</i> <i>s</i> <i>m</i> <i>m</i>	25.00 31.00 13.00 17.00	7,292.70	††
Lindsay.....	7,161	{ 423 27	100 c.p. 1,000 c.p.	<i>s</i> <i>s</i>	15.00 70.00	8,176.25	1.14
Listowel.....	2,712	{ 161 118 8 26 3	60 watt 100 watt 200 watt 300 watt 500 watt	<i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i>	9.00 11.00 25.00 30.00 35.00	3,465.66	1.28
London.....	69,742	{ 1,991 298 313 101 32 8 42 11 488 63 2 21 27	150 c.p. 600 c.p. 400 c.p. 400 c.p. 600 c.p. 150 c.p. 500 watt 500 watt 300 watt 200 watt 50 watt 300 watt 200 watt	<i>s</i> <i>s</i> <i>s</i> <i>s</i> <i>s</i> <i>s</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i>	11.00 30.00 24.00 18.00 28.00 10.00 40.00 25.00 18.00 18.00 5.00 20.00 14.00	52,098.81	††
London Twp...		{ 3 3 13	400 c.p. 600 c.p. 100 c.p.	<i>s</i> <i>s</i> <i>s</i>	24.00 30.00 11.00	949.00	**
Long Branch ..	4,016	263	100 watt	<i>m</i>	13.00	3,281.15	†
Lucan.....	588	71	100 watt	<i>m</i>	15.00	1,061.25	1.80
Lucknow.....	1,115	{ 57 16	100 watt 200 watt	<i>m</i> <i>m</i>	21.00 31.00	1,693.00	1.52
Lynden.....		41	100 watt	<i>m</i>	10.00	410.00	**
Madoc.....	1,019	{ 342 7 3	75 watt 150 watt 300 watt	<i>m</i> <i>m</i> <i>m</i>	5.00 6.00 12.00	1,788.00	1.75
Markdale.....	812	88	150 c.p.	<i>s</i>	8.00	686.70	0.85

\*\*Population not shown in Government statistics. *s* Series system. *m* Multiple system.

†11 months' operation.

††Part of cost paid direct in form of debenture charges.

## STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1931, showing  
Rate per Lamp, Cost to Municipality per Annum, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps		Rate per lamp per annum	Total cost to municipality per annum	Cost per capita
Markham.....	931	104	100 watt	<i>m</i>	\$ c. 14 00	\$ c. 1,463.00	\$ c. 1.57
Marmora.....	1,013	{ 37 35 15	75 watt 100 watt 150 watt	<i>m</i> <i>m</i> <i>m</i>	{ 15.00 17.00 20.00	1,450.00	1.43
Martintown.....		15	100 watt	<i>m</i>	20.00	300.00	**
Maxville.....	742	65	100 c.p.	<i>s</i>	22.00	1,426.76	1.92
Meaford.....	2,708	{ 180 28 35	150 c.p. 100 watt 200 watt	<i>s</i> <i>m</i> <i>m</i>	{ 13.00 13.00 22.00	3,425.16	1.26
Merlin.....		43	100 watt	<i>m</i>	16.00	688.00	**
Merritton.....	2,596	311	100 watt	<i>m</i>	9.00	2,799.00	1.08
Midland.....	7,116	{ 385 56 30 36	100 c.p. 100 watt 300 watt 500 watt	<i>s</i> <i>m</i> <i>m</i> <i>m</i>	{ 10.00 7.50 22.00 40.00	6,190.85	0.87
Milton.....	1,775	{ 200 3	100 watt 300 watt	<i>m</i> <i>m</i>	{ 9.00 30.00	1,931.73	1.09
Milverton.....	981	{ 95 12	100 watt 200 watt	<i>m</i> <i>m</i>	{ 9.00 12.00	999.00	1.02
Mimico.....	6,108	{ 206 206 46 1	100 watt 200 watt 300 watt 500 watt	<i>m</i> <i>m</i> <i>m</i> <i>m</i>	{ 14.00 21.50 28.00 45.00	8,504.78	1.39
Mitchell.....	1,593	232	100 watt	<i>m</i>	9.00	2,088.00	1.31
Moorefield.....		25	100 watt	<i>m</i>	15.00	375.00	**
Mount Brydges.....		49	100 watt	<i>m</i>	11.00	506.00	**
Mount Forest..	1,888	{ 135 39 16	100 c.p. 150 c.p. 100 watt	<i>s</i> <i>s</i> <i>m</i>	{ 12.00 14.00 12.00	2,358.00	1.25
Napanee.....	2,984	{ 26 127 40	320 c.p. 100 c.p. 300 watt	<i>s</i> <i>s</i> <i>m</i>	{ 37.00 16.00 32.00	4,245.80	1.42
Neustadt.....	460	39	150 c.p.	<i>s</i>	25.00	975.00	2.12
Newbury.....	291	48	100 watt	<i>m</i>	15.00	719.89	2.47
New Hamburg..	1,409	{ 61 162	200 watt 100 watt	<i>m</i> <i>m</i>	{ 12.50 9.00	2,105.92	1.49

\*\*Population not shown in Government statistics.    *s* Series system.    *m* Multiple system.



## STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1931, showing  
Rate per Lamp, Cost to Municipality per Annum, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps		Rate per lamp per annum	Total cost to municipality per annum	Cost per capita
					\$ c.	\$ c.	\$ c.
New Toronto..	6,310	{ 205 26 58 126 2	75 watt 100 watt 200 watt 500 watt Intersection	<i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i>	15.00 16.00 19.00 30.00 28.00	8,429.04	1.34
Niagara Falls..	18,539	{ 787 60 2 197 234 4 4	100 c.p. 600 c.p. 250 c.p. 1,000 c.p. 600 c.p. 600 c.p. 100 watt	<i>s</i> <i>s</i> <i>s</i> <i>s</i> <i>s</i> <i>s</i> <i>m</i>	11.00 18.00 13.00 50.00 44.00 60.00 11.00	30,661.84	1.65
Niagara-on-the- Lake.....	1,633	{ 203 24	100 watt 200 watt	<i>m</i> <i>m</i>	11.00 18.00	2,646.75	1.62
Nipigon.....		32	100 watt	<i>m</i>	18.00	576.00	**
Norwich.....	1,101	{ 112 28	100 watt 400 watt	<i>m</i> <i>m</i>	10.00 35.00	2,115.00	1.92
Norwood.....	756	{ 80 6 1	100 c.p. 100 c.p. 100 c.p.	<i>s</i> <i>s</i> <i>s</i>	18.00 20.00 27.00	1,575.00	2.08
Oil Springs....	445	{ 41 1	100 watt 300 watt	<i>m</i> <i>m</i>	18.00 30.00	753.00	1.69
Omemee.....	489	{ 46 10	100 c.p. 250 c.p.	<i>s</i> <i>s</i>	14.00 28.00	924.00	1.89
Orangeville....	2,772	{ 99 48 38	150 c.p. 250 watt 300 watt	<i>s</i> <i>s</i> <i>m</i>	16.00 21.00 48.00	3,442.36	1.24
Oshawa.....	25,550	{ 1 825 39 109	1,000 c.p. 100 c.p. 100 watt 150 watt	<i>s</i> <i>s</i> <i>m</i> <i>m</i>	27.00 10.00 11.00 12.00	9,982.05	0.39
Ottawa.....	125,496	{ 59 774 751 368 590 2,940	Arc 600 c.p. 400 c.p. 100 c.p. 100 watt 100 watt	<i>s</i> <i>s</i> <i>s</i> <i>s</i> <i>m</i> <i>m</i>	45.00 35.00 25.00 7.00 6.00 48c. per ft.	71,652.27	0.57
Otterville.....		{ 21 20 12	100 watt 100 watt 200 watt	<i>m</i> <i>m</i> <i>m</i>	11.00 11.00 16.00	409.72	**
Owen Sound...	12,778	{ 407 335 15 6 13 39	100 watt 250 watt 150 watt 300 watt 400 watt 500 watt	<i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i>	11.00 14.00 11.50 15.00 21.00 35.00	9,574.75	0.75

\*\*Population not shown in Government statistics.    *s* Series system.    *m* Multiple system.

## STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1931, showing  
Rate per Lamp, Cost to Municipality per Annum, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps		Rate per lamp per annum	Total cost to municipality per annum	Cost per capita
Paisley.....	716	88	100 watt	<i>m</i>	\$ c. 16.00	\$ c. 1,408.00	\$ c. 1.97
		{	94 80 c.p.	<i>s</i>	9.00		
			6 100 c.p.	<i>s</i>	10.00		
			4 250 c.p.	<i>s</i>	25.00		
			1 40 watt	<i>m</i>	9.00		
			10 60 watt	<i>m</i>	9.00		
Palmerston....	1,758	{	2 100 watt	<i>m</i>	11.00	1,717.99	0.98
			13 150 watt	<i>m</i>	11.00		
			2 250 watt	<i>m</i>	25.00		
			15 300 watt	<i>m</i>	25.00		
			1 500 watt	<i>m</i>	35.00		
Paris.....	4,205	{	448 100 c.p.	<i>s</i>	9.00	5,724.90	1.36
			13 400 c.p.	<i>s</i>	35.00		
			25 500 c.p.	<i>s</i>	45.00		
Parkhill.....	968	{	78 100 watt	<i>m</i>	14.00	1,437.00	1.48
			15 200 watt	<i>m</i>	23.00		
Penetanguishene	3,767	{	184 100 watt	<i>s</i>	10.00	1,920.00	0.51
			9 200 watt	<i>m</i>	10.00		
			3 300 watt	<i>m</i>	10.00		
Perth.....	3,762	{	66 100 c.p.	<i>s</i>	15.00	2,112.80	0.56
			15 250 c.p.	<i>s</i>	25.00		
			4 400 c.p.	<i>s</i>	28.00		
			16 600 c.p.	<i>s</i>	40.00		
Peterborough..	22,487	{	115 400 c.p.	<i>s</i>	43.00	19,376.04	0.86
			222 60 watt	<i>m</i>	9.00		
			375 100 watt	<i>m</i>	10.00		
			482 300 watt	<i>m</i>	18.00		
			1 500 watt	<i>m</i>	34.00		
Petrolia.....	2,532	{	145 150 c.p.	<i>s</i>	12.00	2,652.00	1.05
			24 600 c.p.	<i>s</i>	38.00		
Picton.....	3,146	{	85 250 c.p.	<i>s</i>	20.00	4,359.04	1.39
			222 100 c.p.	<i>s</i>	12.00		
Plattsville.....		34	100 watt	<i>m</i>	16.00	544.00	**
Point Edward..	1,232	{	103 150 c.p.	<i>s</i>	12.00	1,489.25	1.21
			15 250 c.p.	<i>s</i>	20.00		
Port Arthur...	20,092	{	2,513 100 watt	<i>m</i>	5.00	16,451.64	0.82
			212 300 watt	<i>m</i>	10.00		
			174 500 watt	<i>m</i>	15.00		
Port Colborne..	6,202	{	15 400 c.p.	<i>s</i>	25.00	7,790.96	††
			78 600 c.p.	<i>s</i>	28.00		
			126 200 watt	<i>m</i>	17.00		
			228 100 watt	<i>m</i>	12.00		
			26 100 watt	<i>m</i>	14.00		

\*\*Population not shown in Government statistics. *s* Series system. *m* Multiple system.

††Part of cost paid direct in form of debenture charges.

## STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1931, showing  
Rate per Lamp, Cost to Municipality per Annum, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps		Rate per lamp per annum	Total cost to municipality per annum	Cost per capita
					\$ c.	\$ c.	\$ c.
Port Credit....	1,600	{ 113 152	100 watt 200 watt	<i>m</i> <i>m</i>	10.00 16.00	3,552.00	2.22
Port Dalhousie.	1,555	{ 128 2	100 watt 200 watt	<i>m</i> <i>m</i>	12.50 15.00	1,630.00	1.05
Port Dover....	1,625	{ 216 19	100 watt 300 watt	<i>m</i> <i>m</i>	12.50 30.00	2,952.60	1.82
Port Elgin.....	1,203	{ 99 26	100 watt 200 watt	<i>m</i> <i>m</i>	14.00 22.00	1,424.64	†
Port Hope.....	4,415	384	100 c.p.	<i>s</i>	12.00	4,602.00	1.04
Port McNicoll.	825	46	100 watt	<i>m</i>	11.00	506.00	0.61
Port Perry....	1,288	{ 97 2	100 watt 200 watt	<i>m</i> <i>m</i>	14.00 20.00	1,387.00	1.08
Port Rowan...	558	{ 48 5	100 watt 100 watt	<i>m</i> <i>m</i>	24.00 24.00	1,242.00	2.23
Port Stanley...	693	177	100 watt	<i>m</i>	11.00	1,925.00	2.78
Prescott.....	2,940	{ 164 105	100 watt 2-Lt. brackets	<i>m</i> <i>m</i>	10.00 17.00	3,425.00	1.16
Preston.....	6,171	{ 348 9 40 6	150 c.p. 250 watt 500 watt 5-Lt. stds.	<i>s</i> <i>m</i> <i>m</i> <i>m</i>	10.00 18.00 30.00 30.00	5,010.31	0.81
Priceville.....		14	100 watt	<i>m</i>	40.00	560.00	**
Princeton.....		28	100 watt	<i>m</i>	13.00	364.00	**
Queenston.....		35	100 watt	<i>m</i>	16.00	549.59	**
Richmond....	367	24	100 watt	<i>m</i>	23.00	552.00	1.50
Richmond Hill.	1,197	{ 6 17 99	200 watt 100 watt 75 watt	<i>m</i> <i>m</i> <i>m</i>	16.00 12.00 11.00	1,389.00	1.16
Ridgetown....	1,981	{ 186 1 73 19	150 c.p. 1,000 c.p. 100 watt 500 watt	<i>s</i> <i>s</i> <i>m</i> <i>m</i>	11.00 40.00 10.00 38.00	3,577.66	††
Ripley.....	410	{ 44 6	100 watt 200 watt	<i>m</i> <i>m</i>	25.00 40.00	1,310.00	3.20
Riverside.....	5,125	{ 206 78 74	100 watt 150 watt 200 watt	<i>m</i> <i>m</i> <i>m</i>	11.00 14.50 18.00	4,728.96	††

\*\*Population not shown in Government statistics. *s* Series system. *m* Multiple system.

†9 months' operation.

††Part of cost paid direct in form of debenture charges.



## STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1931, showing  
Rate per Lamp, Cost to Municipality per Annum, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps		Rate per lamp per annum	Total cost to municipality per annum	Cost per capita
Rockwood.....		83	100 watt	<i>m</i>	\$ c. 9.00	\$ c. 747.00	\$ c. **
Rodney.....	690	{ 69 18	100 watt 200 watt	<i>m</i> <i>m</i>	10.00 18.00	1,006.19	1.46
Rosseau.....	230	31	100 watt	<i>m</i>	40.00	413.33	†
Russell.....		46	100 watt	<i>m</i>	22.00	1,012.00	**
St. Catharines..	25,347	3,333	100 watt	<i>m</i>	7.50	25,309.73	††
St. George.....		38	100 watt	<i>m</i>	8.00	304.00	**
St. Jacobs.....		46	100 watt	<i>m</i>	10.00	460.00	**
St. Marys.....	4,073	{ 234 136	100 c.p. 250 c.p.	<i>s</i> <i>s</i>	8.00 12.00	3,504.00	0.86
St. Thomas....	16,869	{ 1,067 114 28 6 22	100 c.p. 600 c.p. 250 c.p. 60 watt 300 watt	<i>s</i> <i>s</i> <i>s</i> <i>m</i> <i>m</i>	9.00 34.00 13.00 4.50 22.00	14,506.63	††
Sandwich.....	11,819	{ 16 87 30 176 270 10 14	600 c.p. 400 c.p. 400 c.p. 100 c.p. 100 c.p. 100 watt 200 watt	<i>s</i> <i>s</i> <i>s</i> <i>s</i> <i>s</i> <i>m</i> <i>m</i>	35.00 26.00 28.00 12.00 13.00 12.00 21.00	10,555.22	††
Sarnia.....	17,003	{ 984 47 83 13 82 14	150 c.p. 250 c.p. 400 c.p. 600 c.p. 600 c.p. 300 watt	<i>s</i> <i>s</i> <i>s</i> <i>s</i> <i>s</i> <i>m</i>	12.00 16.50 22.00 45.00 35.00 32.00	18,814.65	††
Scarboro Twp..		{ 2 221 2 19 433 7 317	200 c.p. 100 c.p. 60 watt 40 watt 100 watt 200 watt 300 watt	<i>s</i> <i>s</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i>	17.00 13.00 18.00 12.00 13.00 17.00 26.00	17,148.75	**
Seaforth.....	1,689	{ 65 58 20	80 c.p. 100 c.p. 300 watt	<i>s</i> <i>s</i> <i>m</i>	10.00 11.00 25.00	1,788.00	1.06
Shelburne.....	1,138	96	150 c.p.	<i>s</i>	10.00	960.00	0.84

\*\*Population not shown in Government statistics. *s* Series system. *m* Multiple system.

†4½ months' operation.

††Part of cost paid direct in form of debenture charges.

## STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1931, showing  
Rate per Lamp, Cost to Municipality per Annum, and Cost per Capita.

Municipality	Population	Number of lamps]	Size and style of lamps	Rate per lamp per annum	Total cost to municipality per annum	Cost per capita
				\$ c.	\$ c.	\$ c.
Simcoe.....	5,044	{ 275 27 3 8 1 1	100 c.p. 1,000 c.p. 150 watt 200 watt 500 watt 1,000 watt	s s m m m m	11.00 40.00 11.00 15.00 53.00 106.00	3,940.29 ††
Smiths Falls...	7,452	{ 18 104 253	60 watt 100 watt 300 watt	m m m	9.50 18.00 23.00	7,696.83 1.03
Southampton..	1,700	{ 18 84	250 watt 100 watt	m m	22.00 14.00	1,546.74 †
Springfield.....	404	50	100 watt	m	11.00	550.00 1.36
Stamford Twp. ....		836	100 watt	m	10.00	8,270.21 **
Stayner.....	949	{ 77 18	100 watt 200 watt	s m	10.00 14.00	1,022.00 1.08
Stirling.....	822	121	150 c.p.	s	8.00	968.04 1.18
Stouffville.....	1,070	122	100 watt	m	14.00	1,705.66 1.59
Stratford.....	18,909	{ 861 74 116 6 62 4 4	100 c.p. 600 c.p. 600 c.p. 600 c.p. 1,000 c.p. 100 watt 500 watt	s s s s s m m	10.00 25.00 30.00 35.00 34.00 10.00 34.00	16,517.32 0.87
Strathroy.....	2,755	{ 330 21 17	150 c.p. 400 c.p. 600 watt	s s m	9.00 15.00 62.00	4,338.96 1.57
Sunderland.....		{ 32 1	100 watt 500 watt	m m	18.00 35.00	612.00 **
Sutton.....	831	{ 119 20	100 watt 200 watt	m m	13.00 17.00	1,891.34 2.28
Tara.....	455	67	100 watt	m	20.00	1,340.00 2.95
Tavistock.....	959	{ 78 36	100 watt 200 watt	m m	10.00 12.00	1,189.50 1.24
Tecumseh.....	2,560	{ 17 61	400 c.p. 100 watt	s m	21.00 12.00	1,089.00 ††
Teeswater.....	835	{ 38 20	100 watt 250 watt	s s	20.00 35.00	1,460.00 1.75
Thamesford.....		47	100 watt	m	11.00	517.00 **

\*\*Population not shown in Government statistics. s Series system. m Multiple system.

†10 months' operation.

††Part of cost paid direct in form of debenture charges.

## STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1931, showing  
Rate per Lamp, Cost to Municipality per Annum, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps		Rate per lamp per annum	Total cost to municipality per annum	Cost per capita
					\$ c.	\$ c.	\$ c.
Thamesville...	884	{ 67 33 7	100 watt 200 watt 200 watt	<i>m</i> <i>m</i> <i>m</i>	9.00 14.00 18.00	1,186.50	1.34
Thedford.....	539	69	100 watt	<i>m</i>	15.00	1,035.00	1.92
Thorndale.....		31	100 watt	<i>m</i>	12.00	372.00	**
Thornton.....		22	100 watt	<i>m</i>	40.00	845.00	**
Thorold.....	5,000	{ 382 40 28 2	75 watt 100 watt 200 watt 300 watt	<i>m</i> <i>m</i> <i>m</i> <i>m</i>	7.50 8.00 12.00 15.00	3,551.00	0.71
Tilbury.....	1,905	{ 97 2 25	100 watt 100 watt 200 watt	<i>m</i> <i>m</i> <i>m</i>	11.00 11.00 19.50	1,565.55	0.82
Tillsonburg....	3,189	{ 270 47 2	100 c.p. 250 c.p. 1,000 c.p.	<i>s</i> <i>s</i> <i>s</i>	8.00 13.00 45.00	2,872.00	0.90
Toronto.....	606,370	{ 45,902 3,042 67 1,396 133 5 365 68 391 76	100 watt 200 watt 250 watt 300 watt 500 watt 1,000 watt 100 w, 5-lt. stds. 500 w, 1-lt. stds. 300 w, 1 lt. stds. 500 w, 1 lt. stds.	<i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i>	8.00-10.00 18.00-23.00 20.00 28.00-30.00 45.00 90.00 47.50 47.50 50.00 52.50	520,325.71	0.86
Toronto Twp..		{ 411 1	100 watt Intersection lt.	<i>m</i>	12.00 43.20	4,951.26	**
Tottenham....	538	49	100 watt	<i>s</i>	25.00	1,225.08	2.28
Tweed.....	1,206	125	100 c.p.	<i>s</i>	15.00	1,840.00	1.53
Uxbridge.....	1,482	129	100 watt	<i>m</i>	12.00	1,548.00	1.04
Victoria Harbor	950	78	100 watt	<i>m</i>	9.00	702.00	0.74
Walkerton.....	2,280	{ 38 112	200 watt 100 watt	<i>s</i> <i>s</i>	24.50 12.50	2,142.25	†
Walkerville....	11,219	{ 56 228 582 112 198	600 c.p. 100 watt 150 watt 200 watt 300 watt	<i>s</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i>	45.00 8.00 11.00 13.00 18.00	15,543.48	††

\*\*Population not shown in Government statistics. *s* Series system. *m* Multiple system.

†11 months' operation.

††Part of cost paid direct in form of debenture charges.



## STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1930, showing  
Rate per Lamp, Cost to Municipality per Annum, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps		Rate per lamp per annum	Total cost to municipality per annum	Cost per capita
					\$ c.	\$ c.	\$ c.
Wallaceburg...	4,268	{ 185 11 3 50	150 c.p. 400 c.p. 1,000 c.p. 300 watt	s s s m	12.00 25.00 39.00 39.00	4,319.01	1.01
Wardsville.....	209	35	75 watt	m	20.00	700.00	3.35
Warkworth.....		{ 26 6	100 watt 200 watt	m m	18.00 30.00	649.50	**
Waterdown....	917	{ 75 6	100 watt 200 watt	s s	11.00 17.50	930.00	1.01
Waterford.....	1,091	{ 178 1	100 watt 100 watt	m m	9.00 9.00	1,608.00	1.47
Waterloo.....	8,389	{ 44 10 9 3 18 12 66 125 346	5-Lt. stds. 3-Lt. stds. 500 watt 500 watt 300 watt 200 watt 150 watt 100 watt 80 watt	m m m m m m m m m	36.00 25.00 35.00 30.00 21.00 12.00 10.00 10.00 8.00	7,387.05	0.88
Watford.....	977	{ 89 11	100 watt 200 watt	m m	12.50 20.00	1,332.48	1.36
Waubashene.....		45	100 watt	m	8.00	349.33	**
Welland.....	10,141	{ 182 4 51 410 12	600 c.p. 500 watt 200 watt 100 watt 300 watt	s m m m m	30.00 28.00 18.00 11.00 30.00	11,176.09	††
Wellesley.....		60	100 watt	m	12.00	720.00	**
Wellington....	900	{ 32 39	250 c.p. 100 c.p.	s s	19.00 12.00	1,070.04	1.19
West Lorne....	741	{ 83 10	100 watt 200 watt	m m	10.00 18.00	1,010.04	1.36
Weston.....	4,606	{ 456 2 113 20 5 2	100 c.p. 250 c.p. 600 c.p. 300 watt 5-Lt. stds. Signs	s s s m m m	7.50 10.00 30.00 11.00 21.00 110.00	7,777.58	1.70
Wheatley.....	748	{ 71 40	100 watt 300 watt	m m	12.00 25.00	1,852.00	2.48

\*\*Population not shown in Government statistics. s Series system. m Multiple system.

††Part of cost paid direct in form of debenture charges.

## STATEMENT "C"—Concluded

Street Lighting Installation in Hydro Municipalities, December 31, 1931, showing  
Rate per Lamp, Cost to Municipality per Annum, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Rate per lamp per annum	Total cost to municipality per annum	Cost per capita
				\$ c.	\$ c.	\$ c.
Whitby.....	5,463	{ 133 79 141 3	{ 80 c.p. 100 c.p. 100 watt 500 watt	{ s s m m 9.00 10.00 7.50 11.50	{ 3,311.42	{ 0.61
Warton.....	1,880	{ 100 25	{ 100 watt 200 watt	{ m m 18.00 30.00	{ 1,399.00	{ †
Williamsburg.....		17	100 watt	m 12.00	204.00	**
Winchester....	970	118	100 watt	m 9.00	1,062.00	1.09
Windermere....	124	13	100 watt	m 35.00	455.00	3.67
Windsor.....	70,031	{ 2,909 11 984 706 66 15	{ 100 c.p. 250 c.p. 400 c.p. 600 c.p. 1,000 c.p. 400 c.p., Pk. Lt. 4 months	{ s s s s s s 11.50 17.50 27.50 36.00 46.00	{ 87,768.07	{ ††
Wingham.....	2,229	{ 25 99 24	{ 200 watt 100 watt 200 watt	{ s s m 33.00 20.00 33.00	{ 3,597.00	{ 1.61
Woodbridge...	737	82	100 watt	m 10.00	827.52	1.12
Woodstock....	1,089	{ 13 531 89 25 75	{ 250 c.p. 100 c.p. 75 watt 150 watt 300 watt	{ s s m m m 20.00 8.00 8.00 12.00 32.00	{ 7,783.40	{ 0.71
Woodville.....	403	{ 35 4	{ 100 watt 200 watt	{ m m 12.00 20.00	{ 500.00	{ 1.24
Wyoming.....	473	50	100 watt	m 15.00	750.00	1.59
York Twp., East.....		{ 908 238 15	{ 100 watt 300 watt 500 watt	{ m m m 13.00 26.00 29.00	{ 18,191.02	
York Twp., North.....		{ 81 19 31 12 65 14 34 1 2	{ 100 watt 100 watt 100 watt 100 watt 200 watt 200 watt 150 watt 400 watt 1,000 watt	{ m m m m m m m m m 12.00 13.00 13.50 15.00 23.00 30.00 32.00 31.00 65.00	{ 4,526.03	
Zurich.....		63	100 watt	m 11.00	693.00	**

\*\*Population not shown in Government statistics. s Series system. m Multiple system.  
†7 months' operation.

††Part of cost paid direct in form of debenture charges.

**STATEMENT "D"**

(pages 382 to 399)

**Statistics Relating to the Supply of Electrical Energy to Consumers  
by Individual Ontario Municipalities Served by the  
Hydro-Electric Power Commission  
for the year 1931**

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**STATEMENT "E"**

(pages 400 to 415)

**Cost of Power to Municipalities and Rates to Consumers for  
Domestic Service—Commercial Light Service—Power Service  
in Ontario Urban Municipalities Served by the  
Hydro-Electric Power Commission  
for the year 1931**



## STATEMENT "D"

**Statistics Relating to the Supply of Electrical Energy to  
Consumers in Ontario Municipalities Served by  
The Hydro-Electric Power Commission**

The following tabulation of various statistical data relating to the supply of electrical energy to consumers by individual municipalities receiving power at cost from the Commission sets forth, regarding the results of operation from the standpoint of the consumers, much useful and interesting information.

The policy and practice of the Commission has been, and is, to make as widespread and beneficial a distribution of electrical energy as possible, and to extend to every community that can economically be reached by transmission lines, the benefit of electrical service. Even where, in certain localities, by reason of the distance from a source of supply or of the smallness of the quantity of power required by the municipality, the cost per horsepower to the municipality—and, consequently, the cost of service to the consumer—must unavoidably be higher than in more favourably situated communities, service has not been withheld when the consumers were able and willing to pay the cost.

The accompanying diagram summarizes graphically certain data of Statement "D," respecting the average cost to the consumer. It will be observed that the total amount of the energy sold in municipalities where circumstances necessitate rates which result in the higher average costs to the consumer is relatively insignificant. With respect to power service, it should be noted that the statistics of Statement "D," and of the diagram, cover mainly retail power service supplied to the smaller industrial consumers. The average amount of power taken by the industrial consumers served by the municipalities is about 40 horsepower. The Commission serves certain large power consumers direct on behalf of the various systems of municipalities.

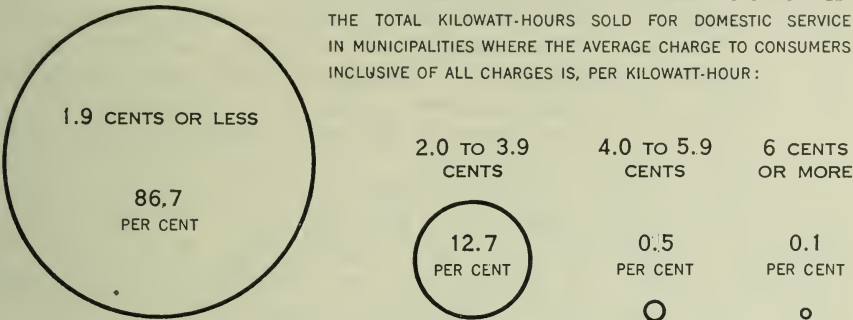
It should be kept in mind that the revenues reported in Statement "D," and used for purposes of calculating the net unit costs to the consumer, are the total revenues contributed by the consumers, and include, in addition to the cost of power, sums specifically applicable to the retirement of capital, and also operating surplus which is in part applied to retirement of capital or extension of plant and is in part returned in cash to the consumers.

It should specially be noted that average costs per kilowatt-hour or per horsepower if employed indiscriminately as a criterion by means of which to compare the rates or prices for electrical service in various municipalities, will give very misleading results. The average costs per kilowatt-hour, as given in Statement "D" for respective classes of service in each municipality, are simply statistical results obtained by dividing the respective revenues by the aggregate kilowatt-hours sold. As such, the data reflect the combined influence of a number of factors, of which the rates or prices to consumers are but one factor. Owing to the varying influence of factors other than the rates, it is seldom found that in any two municipalities the average cost per kilowatt-hour to the consumers, even of the same classification, is in proportion to the respective rates for service. Instances even occur where for a class of consumers in one municipality, the average costs per kilowatt-hour are substantially lower than for the same class in another municipality, even though the rates are higher.

COST OF ELECTRICAL SERVICE  
IN MUNICIPALITIES SERVED BY THE  
HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

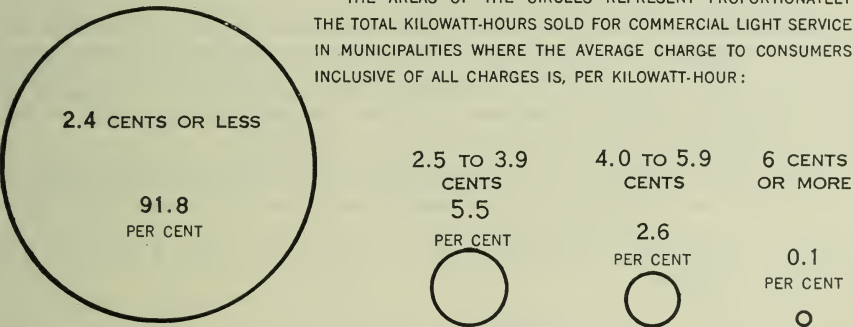
DOMESTIC SERVICE

THE AREAS OF THE CIRCLES REPRESENT PROPORTIONATELY THE TOTAL KILOWATT-HOURS SOLD FOR DOMESTIC SERVICE IN MUNICIPALITIES WHERE THE AVERAGE CHARGE TO CONSUMERS INCLUSIVE OF ALL CHARGES IS, PER KILOWATT-HOUR:



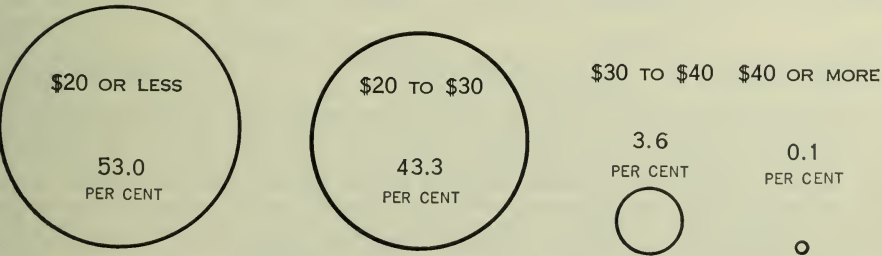
COMMERCIAL LIGHT SERVICE

THE AREAS OF THE CIRCLES REPRESENT PROPORTIONATELY THE TOTAL KILOWATT-HOURS SOLD FOR COMMERCIAL LIGHT SERVICE IN MUNICIPALITIES WHERE THE AVERAGE CHARGE TO CONSUMERS INCLUSIVE OF ALL CHARGES IS, PER KILOWATT-HOUR:



POWER SERVICE SUPPLIED BY MUNICIPALITIES

THE AREAS OF THE CIRCLES REPRESENT PROPORTIONATELY THE AGGREGATE HORSEPOWER SOLD FOR POWER SERVICE IN MUNICIPALITIES WHERE THE AVERAGE CHARGE TO CONSUMERS INCLUSIVE OF ALL CHARGES IS, PER HORSEPOWER PER YEAR:



With respect to domestic service, for example, instances will be observed where two municipalities have identical prices or rates for domestic service, but the average cost per kilowatt-hour to the consumer varies by as much as 100 per cent. Such variations are principally due to differences in the extent of utilization of the service for the operation of electric ranges, water heaters and other appliances, an indication of which is afforded by the statistics of average monthly consumption.

In the case of power service, average unit costs are still less reliable as an indication of the relative rates for service in different municipalities. In the case of hydro-electric power supplied to industries at cost, the rate schedules incorporate charges both for demand and for energy consumption, and thus, although the quantity of power taken by a consumer—that is, the demand as measured in horsepower—is the most important factor affecting costs and revenues, it is not the only one. The number of hours the power is used in the month or year—which, in conjunction with the power, determines the energy consumption, as measured in kilowatt-hours—also affects the costs and revenues. Consequently, in two municipalities charging the same rates for power service, the average cost per horsepower to the consumer will vary in accordance with the consumers' average number of hours' use of the power per month. A greater average energy consumption per horsepower increases the average cost per horsepower and decreases the average cost per kilowatt-hour, to the consumer, and *vice versa*.\*

\*In view of the fact that the data of Statement "D" have been misinterpreted in the making of certain comparisons as to the cost of electricity in various territories, it is desirable to add a word of caution respecting their significance. Essentially, the average cost or revenue per kilowatt-hour is *not a criterion of rates* even with similar forms of rate schedules and for the same class of service. Particularly is this true when revenues and consumptions of all classes of service, and of all kinds of rate schedules, are indiscriminately lumped together in order to deduce a so-called "average cost or rate per kilowatt-hour" for all services.

*In one community rates for each class of service, and the cost to every consumer in each class for any given service and consumption, may be substantially higher than in another community, and yet there may be in the former community, a lower "average revenue per kilowatt-hour."* This will readily be perceived from a simple arithmetical example.

EXAMPLE.—Assume sales of electrical energy by two electric utilities, A and B, in each case 10,000,000 kilowatt-hours.

Class of service	CASE A			CASE B		
	Higher rates and lower revenues per kilowatt-hour			Lower rates and higher revenues per kilowatt-hour		
	Energy sales	Rate per kw-hr.	Revenue	Energy sales	Rate per kw-hr.	Revenue
	kw-hr.	cents	\$	kw-hr.	cents	\$
Residence.....	1,000,000	4	40,000	3,000,000	3	90,000
Power.....	9,000,000	1	90,000	7,000,000	0.75	52,500
Total.....	10,000,000	.....	130,000	10,000,000	.....	142,500
Average revenue..	1.3 cents per kw-hr.			1.425 cents per kw-hr.		

It will be observed that in Case A the rates both for residence and for power service are 33 per cent higher than in Case B, but the average revenue per kilowatt-hour is nearly 9 per cent less.

In this instance, the key to the situation lies in the relative quantities of energy sold to each class. Service to large power consumers entails a smaller capital investment in distribution lines and equipment and lower operating costs per kilowatt-hour delivered, than does service to domestic and to commercial light consumers, and even where the rates for all classes of service are low, produces a smaller average revenue per kilowatt-hour. Consequently, if one electrical utility as compared with another sells a larger proportion of its energy for power purposes, its "average revenue per kilowatt-hour" may easily be lower than that of the other utility even though its rates for every class of service are substantially higher.



Although the derived statistics of Statement "D" are valueless as a means of comparing the *rates* in one municipality with those in another, they nevertheless fulfil an important function in affording a general measure of the *economy of service* to consumers in the co-operating Ontario municipalities—an economy that has resulted primarily from the low rates themselves, and secondarily from the extensive use of the service that has been made economically possible by the low rates.

Actual bills rendered to typical consumers for similar service under closely comparable circumstances constitute the best basis for effecting comparisons. In researches respecting rates to consumers therefore the actual *rate schedules* of Statement "E" should be employed, and not statistics of average revenues per kilowatt-hour, as these are valueless for rate comparisons—and particularly so when all classifications of service are combined.

In any consideration of the relative economies of electrical service in the various municipalities—whether based on the actual rates for service as set forth in Statement "E," or on the derived statistics resulting from the rates and other factors as presented in Statement "D"—full account should be taken respectively, of the influence upon costs of such factors as the size of the municipality, the distance from the source of power, the features of the power developments from which service is received, the sizes and concentrations of adjacent markets for electricity, and the sizes and characters of the loads supplied under the various classifications by the local electrical utility to the ultimate consumers.

In Statement "D" account has been taken of the sizes of municipalities by grouping them according to whether they are (i) cities—over 10,000 population; (ii) towns of 2,000 to 10,000 population; or (iii) small towns (under 2,000 population), villages, and suburban areas in townships (which are comparable in respect of conditions of supply to the smaller towns and villages). The populations and the approximate transmission distances from the nearest of the generating stations supplying the system, are also given.

A feature of the electrical service in Ontario municipalities served by the Hydro-Electric Power Commission is the strikingly large average annual consumption per domestic consumer. There are in all about 190 Ontario municipalities where the average annual consumption per domestic consumer is in excess of 600 kilowatt-hours. Of the 79 cities and towns with populations of 2,000 or more—in which over 85 per cent of the domestic consumers of the undertaking are served—no less than 52 have an average annual consumption per domestic consumer in excess of 1,000 kilowatt-hours; of these, 27 have an average annual consumption per domestic consumer in excess of 1,500 kilowatt-hours, and 11 have an average annual consumption per domestic consumer in excess of 2,000 kilowatt-hours.

The high average consumption for domestic service results essentially from the policy of the undertaking in providing electrical service "at cost"; the rate schedules scientifically designed according to this principle automatically encourage liberal use of the service. Under the standard rate schedules employed by Ontario municipalities, follow-up rates of 1 cent and 1.25 cents (less 10 per cent) are in common use, and as a rule even where the higher initial rates per kilowatt-hour obtain, it is only necessary for the domestic consumer to reach a monthly charge of from \$2.00 to \$3.00 when he obtains the benefit of a follow-up rate of 1.8 cents net. The cost of electric cooking is thus within reach of most of the domestic consumers in Ontario.

## STATEMENT

Statistics Relating to the Supply of Electric Energy to Consumers  
For Domestic Service, for Commercial Light Service

## Group I—CITIES

Municipality	System	Popula- tion	Distance from nearest generating station supplying system	Domestic service					
				Revenue	Consumption	Number of con- sumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.
			miles	\$ c.	kw-hr.		kw-hr.	\$ c.	cts.
Belleville.....	E.O.	13,443	13	80,175.95	4,039,572	3,046	111	2.20	2.0
Brantford.....	Nia.	30,103	79	166,278.09	11,030,867	6,515	142	2.14	1.5
Chatham.....	Nia.	16,441	193	77,643.30	3,647,366	3,785	80	1.71	2.1
East Windsor....	Nia.	16,203	239	77,126.15	4,288,635	2,713	129	2.32	1.8
Fort William....	T.B.	24,635	87	210,171.46	27,879,923	5,494	418	3.15	0.8
Galt.....	Nia.	13,752	92	105,969.99	5,670,010	3,519	136	2.53	1.9
Guelph.....	Nia.	20,393	75	101,228.46	6,061,053	4,916	101	1.70	1.7
Hamilton.....	Nia.	144,529	53	886,313.22	60,866,504	36,896	147	2.13	1.4
Kingston.....	E.O.	21,616	50	99,385.86	5,031,305	5,556	77	1.52	2.0
Kitchener.....	Nia.	30,274	95	190,049.23	11,436,958	6,926	139	2.32	1.7
London.....	Nia.	69,742	123	467,760.94	34,286,682	16,965	170	2.32	1.4
Niagara Falls....	Nia.	18,539	1	147,591.52	12,050,171	4,361	226	2.77	1.2
Oshawa.....	E.O.	25,550	75	162,125.69	6,137,947	5,896	84	2.22	2.6
Ottawa.....	E.O.	125,496	1	368,906.39	43,205,511	12,178	299	2.52	0.9
Owen Sound.....	G.B.	12,778	32	57,906.42	3,291,318	3,092	90	1.58	1.8
Peterborough....	E.O.	22,487	2	113,554.75	6,259,881	5,197	100	1.82	1.8
Port Arthur.....	T.B.	20,092	73	108,984.41	8,788,106	4,163	177	2.19	1.2
St. Catharines...	Nia.	25,347	18	142,788.23	11,462,232	6,170	157	1.96	1.3
St. Thomas.....	Nia.	16,869	134	102,173.05	6,590,051	4,157	133	2.06	1.6
Sarnia.....	Nia.	17,003	205	101,605.37	5,280,474	4,574	97	1.87	1.9
Stratford.....	Nia.	18,909	119	150,432.56	9,117,450	4,321	176	2.91	1.6
Toronto.....	Nia.	606,370	78	3,504,078.22	237,250,834	148,879	134	1.97	1.5
Toronto D.C. and 60 cycle*.....				50,996.27	1,660,407	896	139	4.25	3.0
Welland.....	Nia.	10,141	14	51,553.49	2,747,017	2,223	103	1.94	1.9
Windsor.....	Nia.	70,031	238	505,424.36	31,574,680	14,400	180	2.89	1.6
Woodstock.....	Nia.	10,898	94	79,454.56	4,810,021	2,842	141	2.33	1.6

\*This,—with the exception of a relatively small D.C. power load,—is a special service not created by the Hydro-Electric Power Commission but acquired through the purchase of a privately owned company. The service has been continued at the request of the customers who preferred to retain the electrical apparatus installed for this special service, and has been continued at the rates prevailing before the service was acquired by the Commission.

## Group II—TOWNS

			miles	\$ c.	kw-hr.		kw-hr.	\$ c.	cts.
Alexandria.....	E.O.	2,370	30	7,295.93	163,769	320	43	1.93	4.5
Amherstburg....	Nia.	3,083	257	20,297.83	934,876	645	121	2.63	2.2
Aylmer.....	Nia.	1,996	145	11,343.60	503,545	601	69	1.56	2.3
Barrie.....	G.B.	7,166	48	45,271.66	3,404,457	1,835	155	2.06	1.3
Brampton.....	Nia.	5,137	78	35,786.15	2,400,216	1,357	149	2.23	1.5
Brockville.....	E.O.	9,432	62	41,002.20	2,124,417	2,452	73	1.41	1.9
Carleton Place...	E.O.	4,278	47	19,177.90	539,975	929	49	1.74	3.6
Collingwood....	G.B.	6,027	24	26,487.67	1,392,679	1,403	83	1.58	1.1
Dundas.....	Nia.	5,137	52	19,784.23	1,185,031	1,172	84	1.41	1.7
Dunnville.....	Nia.	3,412	37	12,099.05	488,092	658	64	1.60	2.5

NOTE: Systems:—Niagara = Nia.; Georgian Bay = G.B.; Eastern Ontario = E.O.; Thunder Bay = T.B.

“D”  
in Ontario Municipalities Served by the Commission  
and for Power Service during the Year 1931  
Population, 10,000 or more

Commercial light service						Power service			Total number of con- sumers
Revenue	Consumption	Number of con- sumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.	Revenue	Number of con- sumers	Average monthly horse- power	
\$ c.	kw-hr.		kw-hr.	\$ c.	cents	\$ c.			
54,926.33	2,254,807	513	368	8.97	2.4	49,295.94	100	2,340.4	3,659
47,771.08	4,647,431	776	512	5.27	1.0	127,871.17	115	7,234.7	7,406
71,246.60	3,741,738	741	433	8.23	1.9	59,822.35	104	3,084.3	4,630
23,618.38	989,397	294	276	6.58	2.4	46,059.43	49	2,059.2	3,056
69,718.74	3,115,811	890	293	6.55	2.2	61,285.93	98	3,161.9	6,482
43,677.69	2,191,547	507	363	7.24	2.0	79,239.07	125	4,375.4	4,151
48,493.53	3,024,596	718	352	5.64	1.6	109,513.29	148	6,578.0	5,782
316,448.95	23,576,083	5,316	442	5.93	1.3	1,419,184.09	1,340	102,976.4	43,552
71,799.59	3,925,265	866	378	6.92	1.8	84,543.32	140	4,410.2	6,562
106,891.03	6,286,026	950	555	9.44	1.7	246,786.67	247	12,885.0	8,123
200,342.80	13,612,694	2,726	423	6.23	1.5	391,510.38	503	19,602.0	20,194
64,277.12	5,476,105	899	564	6.62	1.2	69,244.60	89	4,046.2	5,349
61,246.83	2,215,873	513	360	9.95	2.8	174,528.14	101	7,946.4	6,510
160,255.53	9,829,063	1,392	578	9.43	1.6	98,952.49	222	6,686.4	13,792
35,286.99	2,017,007	574	294	5.15	1.7	37,685.78	124	2,306.2	3,790
63,425.98	3,384,759	759	372	6.96	1.9	92,678.52	155	5,088.1	6,111
56,341.94	3,811,216	717	433	6.40	1.5	812,273.81	93	45,283.0	4,973
46,912.45	3,091,199	677	390	5.91	1.5	84,479.14	145	5,711.0	6,992
46,693.72	3,028,001	664	386	5.96	1.5	53,276.10	102	3,098.5	4,923
49,307.01	2,728,251	664	357	6.45	1.8	157,154.00	89	5,586.0	5,327
52,609.35	2,559,185	638	337	7.10	2.1	61,243.38	144	2,714.1	5,103
2,816,593.68	123,482,704	25,126	411	9.37	2.3	3,268,048.99	4,266	137,941.0	178,271
217,859.78	5,489,250	1,393	307	12.20	4.0	528,706.20	1,033	16,625.0	3,322
31,672.11	1,764,807	433	342	6.14	1.8	62,048.77	77	3,492.1	2,733
270,976.09	15,364,213	2,345	540	9.52	1.8	203,554.74	336	9,696.4	17,081
41,932.75	2,608,860	461	472	7.58	1.6	52,466.77	92	3,337.2	3,395

NOTE—The figures for power service for Toronto do not include street railway power, or exhibition power.

NOTE—The above group of 25 cities utilizes about 80 per cent of the power distributed by the Commission to Ontario municipalities.

of Population, 2,000 or more

\$ c.	kw-hr.		kw-hr.	\$ c.	cents	\$ c.			
3,997.76	99,936	93	87	3.49	4.0	6,217.15	15	189.5	428
7,384.31	310,320	138	189	4.49	2.4	6,314.37	16	208.8	799
7,649.53	343,059	134	217	4.85	2.2	5,101.59	12	273.2	747
25,971.15	1,495,001	345	366	6.35	1.7	14,956.32	44	838.8	2,224
15,738.99	833,852	229	305	5.75	1.9	16,051.18	54	1,003.5	1,640
24,841.17	1,535,373	430	299	4.84	1.6	44,291.22	71	2,041.3	2,953
8,851.99	275,218	183	126	4.04	3.2	27,680.60	20	1,119.2	1,132
10,983.15	463,548	261	148	3.51	2.4	20,947.43	55	1,275.0	1,719
11,793.00	545,526	186	250	5.41	2.2	21,358.40	39	1,402.4	1,397
11,763.25	532,011	188	236	5.21	2.2	15,046.50	32	635.0	878



## STATEMENT

Statistics Relating to the Supply of Electric Energy to Consumers  
For Domestic Service, for Commercial Light Service

## Group II—TOWNS

Municipality	System	Popula- tion	Distance from nearest generating station supplying system	Domestic service					
				Revenue	Consumption	Number of con- sumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.
			miles	\$ c.	kw-hr.		kw-hr.	\$ c.	cts.
Elmira.....	Nia.	2,940	107	16,552.29	873,844	512	139	2.63	1.9
Fergus.....	Nia.	2,465	94	14,116.96	560,045	608	77	1.95	2.5
Goderich.....	Nia.	4,913	167	27,898.71	1,167,623	1,160	83	1.98	2.4
Hanover.....	G.B.	2,920	35	18,930.53	783,200	703	94	2.26	2.4
Hespeler.....	Nia.	2,769	90	18,254.74	901,707	683	110	2.22	2.0
Huntsville.....	G.B.	2,903	26	10,639.75	467,489	542	70	1.60	2.3
Ingersoll.....	Nia.	5,150	104	32,496.04	1,851,116	1,315	117	2.05	1.8
Kincardine.....	G.B.	2,218	69	13,526.92	400,331	583	59	2.00	3.4
Kingsville.....	Nia.	2,200	255	13,183.82	336,590	704	40	1.56	3.9
Leamington.....	Nia.	5,313	263	25,478.62	986,972	1,287	65	1.67	2.6
Lindsay.....	E.O.	7,161	19	37,919.62	1,375,973	1,840	62	1.72	2.7
Listowel.....	Nia.	2,712	154	17,778.07	854,250	700	102	2.12	2.1
Meaford.....	G.B.	2,708	23	12,194.00	417,391	628	55	1.62	2.9
Merritton.....	Nia.	2,596	16	12,143.12	647,239	630	86	1.62	1.9
Midland.....	G.B.	7,116	25	34,816.42	2,159,628	1,540	116	1.88	1.6
Mimico.....	Nia.	6,108	75	54,590.99	3,412,652	1,694	171	2.74	1.6
Napanee.....	E.O.	2,984	19	28,013.89	1,129,071	766	123	3.05	2.5
New Toronto.....	Nia.	6,310	76	33,141.89	1,926,370	1,395	120	2.07	1.7
Orangeville.....	G.B.	2,772	47	12,913.59	522,345	650	67	1.68	2.5
Paris.....	Nia.	4,205	76	24,229.68	1,334,251	1,059	105	1.91	1.8
Penetanguishene.	G.B.	3,767	29	9,570.03	521,530	560	79	1.43	1.8
Perth.....	E.O.	3,762	21	22,183.45	908,622	880	87	2.13	2.4
Petrolia.....	Nia.	2,532	231	11,084.19	449,596	643	59	1.45	2.5
Picton.....	E.O.	3,146	33	21,192.31	1,009,903	966	87	1.83	2.1
Port Colborne...	Nia.	6,202	21	30,210.67	1,472,454	1,223	97	2.00	2.1
Port Hope.....	E.O.	4,415	43	28,814.79	837,452	1,220	57	1.97	3.4
Prescott.....	E.O.	2,940	48	16,143.53	1,064,394	653	136	2.07	1.5
Preston.....	Nia.	6,171	86	47,682.46	2,652,013	1,538	144	2.58	1.8
Riverside.....	Nia.	5,125	243	40,470.28	2,056,365	1,093	154	3.04	2.0
St. Marys.....	Nia.	4,073	133	28,076.43	1,388,726	1,021	114	2.31	2.0
Sandwich.....	Nia.	11,819	245	91,273.04	5,852,099	2,803	174	2.71	1.6
Simcoe.....	Nia.	5,044	103	17,431.74	883,567	997	28	1.53	2.0
Smiths Falls.....	E.O.	7,452	38	40,716.75	1,612,943	1,692	80	2.02	2.5
Strathroy.....	Nia.	2,755	150	20,288.12	973,524	803	102	2.13	2.1
Tecumseh.....	Nia.	2,560	246	15,522.45	606,293	481	105	2.70	2.6
Thorold.....	Nia.	5,000	9	19,385.93	1,051,056	1,181	75	1.38	1.8
Tillsonburg.....	Nia.	3,189	116	13,870.07	668,751	843	66	1.38	2.1
Walkerton*.....	G.B.	2,280	1	11,282.58	365,587	524	.....	.....	.....
Walkerville.....	Nia.	11,219	239	105,476.65	7,077,447	2,468	234	3.48	1.5
Wallaceburg.....	Nia.	4,268	211	17,432.67	764,044	1,003	64	1.46	2.3
Waterloo.....	Nia.	8,389	96	57,887.66	3,630,530	1,836	167	2.66	1.6
Weston.....	Nia.	4,606	80	37,855.97	2,748,538	1,201	195	2.69	1.4
Whitby.....	E.O.	5,463	80	19,464.20	1,000,550	810	104	2.03	1.9
Wingham.....	G.B.	2,229	70	12,770.36	378,788	552	57	1.93	3.4

\*Ten months' operation.

NOTE—The above group of 54 towns utilizes about 12 per cent. of the power distributed by the Commission to Ontario municipalities.

## “D”—Continued

in Ontario Municipalities Served by the Commission  
and for Power Service during the Year 1931  
of Population, 2,000 or more

Commercial light service						Power service			Total number of con- sumers
Revenue	Consumption	Number of con- sumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.	Revenue	Number of con- sumers	Average monthly horse- power	
\$ c.	kw-hr.		kw-hr.	\$ c.	cents	\$ c.			
6,046.20	223,652	117	153	4.15	2.7	5,895.42	20	389.0	649
6,881.57	174,594	116	123	4.86	3.9	11,751.93	16	428.3	740
13,134.22	467,565	237	172	4.82	2.8	14,737.15	17	716.8	1,414
6,405.23	237,679	121	171	4.60	2.7	19,029.21	18	699.1	842
5,787.18	275,581	108	212	4.45	2.1	28,893.61	25	1,505.9	816
6,351.87	288,416	129	215	4.73	2.2	14,920.15	10	709.8	681
16,030.34	852,367	249	294	5.52	1.9	24,822.34	43	1,329.8	1,607
6,636.36	177,105	122	102	3.83	3.7	7,847.00	18	337.8	723
7,030.39	208,642	170	104	3.50	3.4	3,498.26	13	140.1	887
16,385.27	690,190	238	239	5.67	2.4	16,657.99	30	577.8	1,555
22,234.74	843,319	339	220	5.79	2.6	28,096.63	77	1,457.5	2,256
8,609.18	354,603	146	195	4.74	2.4	12,590.23	23	565.5	869
6,402.58	210,441	132	133	4.04	3.0	4,756.22	16	235.6	776
2,347.28	116,828	60	170	3.40	2.0	67,492.03	10	2,882.1	770
13,938.03	749,660	237	257	4.78	1.9	55,787.16	64	4,094.5	1,841
8,804.72	460,374	132	293	5.60	1.9	8,116.15	12	411.6	1,838
16,972.66	472,688	188	209	7.52	3.6	13,658.76	34	587.6	988
11,391.56	667,286	146	392	6.69	1.7	114,933.36	27	5,250.0	1,568
9,004.49	336,950	158	178	4.75	2.7	8,507.19	27	371.3	835
8,594.97	415,978	179	195	4.02	2.1	13,460.75	22	804.5	1,260
3,940.42	229,245	102	189	3.25	1.7	11,571.60	27	509.4	689
14,381.71	502,009	186	224	6.43	2.9	14,570.67	25	634.3	1,091
6,709.64	251,469	174	118	3.14	2.7	20,347.43	53	682.0	870
11,436.97	503,316	188	221	5.02	2.3	9,130.85	44	540.0	1,198
14,089.73	717,942	252	237	4.66	2.0	15,652.62	21	558.0	1,496
15,045.79	421,272	195	180	6.43	3.6	27,582.88	48	1,079.4	1,463
9,074.16	524,269	167	236	4.08	1.7	5,656.92	21	352.8	841
19,104.14	830,621	232	302	6.95	2.3	41,507.45	49	2,291.0	1,819
5,529.95	203,127	61	285	7.81	2.7	9,660.25	8	326.5	1,162
9,124.12	357,526	192	157	4.00	2.6	17,168.59	35	760.6	1,248
21,573.58	1,044,337	237	367	7.59	2.1	14,649.32	37	782.0	3,077
23,580.07	1,321,436	296	382	6.82	1.8	27,212.36	41	1,207.2	1,334
15,712.64	638,942	269	197	4.84	2.5	26,637.24	45	1,083.3	2,006
11,071.97	471,395	180	218	5.13	2.3	9,449.58	26	424.0	1,009
3,713.63	109,085	50	175	5.95	3.4	3,988.76	6	134.6	537
6,705.36	456,545	182	210	3.09	1.5	32,405.13	13	1,589.3	1,376
12,552.78	623,524	228	239	4.71	2.0	11,052.79	30	586.8	1,101
6,620.66	189,551	135	.....	.....	.....	4,372.89	15	197.8	674
34,075.65	1,564,893	341	375	8.16	2.2	157,371.30	102	7,671.0	2,911
10,097.45	469,520	217	185	3.99	2.2	39,263.19	28	1,467.3	1,248
21,688.02	1,039,558	239	367	7.66	2.1	31,895.12	77	1,935.2	2,152
9,165.58	502,869	179	233	4.25	1.8	40,711.84	26	2,054.0	1,406
9,948.09	396,264	159	216	5.44	2.5	14,994.69	15	589.6	984
7,370.70	211,713	161	109	3.81	3.5	10,568.66	29	412.0	742

## STATEMENT

Statistics Relating to the Supply of Electric Energy to Consumers  
For Domestic Service, for Commercial Light Service

## Group III—SMALL TOWNS (less than 2,000 population),

NOTE—The power used in the smaller places and rural districts is, and possibly must always be, a relatively small proportion of the power distributed by the Commission. Thus, the power used by the small municipalities in the following group, which includes small towns, villages and certain suburban areas in townships, is less than 10 per cent. of the power distributed by the Commission to Ontario municipalities. This relatively small proportion of the total power,

Municipality	System	Popula- tion	Distance from nearest generating station supplying system	Domestic service					
				Revenue	Consumption	Number of con- sumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.
			miles	\$ c.	kw-hr.		kw-hr.	\$ c.	cts.
Acton.....	Nia.	1,951	91	10,177.68	542,169	480	93	1.75	1.9
Agincourt.....	Nia.	P.V.	93	4,702.56	138,448	138	84	2.86	3.4
Ailsa Craig.....	Nia.	516	148	2,572.77	82,879	126	53	1.65	3.1
Alliston.....	G.B.	1,364	74	8,894.37	181,886	350	44	2.14	4.9
Alvinston.....	Nia.	657	267	4,546.57	68,062	154	36	2.43	6.7
Ancaster Twp....	Nia.	.....	59	8,952.64	418,362	262	136	2.90	2.1
Apple Hill.....	E.O.	P.V.	19	1,026.30	15,409	43	31	2.09	6.7
Arkona.....	Nia.	383	250	2,447.61	50,836	98	40	2.92	4.8
Arthur.....	G.B.	954	63	4,612.80	89,853	173	43	2.22	5.1
Athens.....	E.O.	614	75	4,554.74	86,159	130	56	2.96	5.3
Ayr.....	Nia.	776	84	4,676.23	219,468	193	96	2.04	2.1
Baden.....	Nia.	P.V.	103	3,494.94	162,230	130	106	2.28	2.2
Beachville.....	Nia.	P.V.	101	3,009.00	110,718	128	73	1.98	2.7
Beaverton*.....	G.B.	988	28	9,218.07	316,515	423	66	1.91	2.9
Beeton.....	G.B.	561	80	3,866.35	75,794	121	52	2.66	5.1
Belle River.....	Nia.	715	250	4,189.51	144,714	180	67	1.94	2.9
Blenheim.....	Nia.	1,630	202	8,267.33	318,103	486	55	1.42	2.6
Bloomfield.....	E.O.	637	29	2,724.65	96,608	152	53	1.49	2.8
Blyth.....	Nia.	621	161	3,688.22	86,091	160	46	1.96	4.2
Bolton.....	Nia.	609	98	2,829.29	80,716	151	46	1.59	3.5
Bothwell.....	Nia.	575	217	2,731.71	104,080	161	54	1.41	2.6
Bradford.....	G.B.	933	74	5,315.32	108,015	203	45	2.22	4.9
Brantford Twp..	Nia.	.....	79	19,468.45	889,058	765	98	2.14	2.2
Brechin.....	G.B.	P.V.	18	1,125.37	22,440	42	46	2.29	5.0
Bridgeport.....	Nia.	P.V.	98	3,383.14	166,587	105	135	2.74	2.0
Brigden.....	Nia.	P.V.	233	2,407.98	54,174	110	42	1.85	4.4
Brighton.....	E.O.	1,343	12	10,350.31	222,514	405	46	2.13	4.6
Brussels.....	Nia.	725	159	5,324.30	144,934	207	60	2.21	3.7
Burford.....	Nia.	P.V.	83	4,324.12	209,397	186	94	1.95	2.1
Burgessville.....	Nia.	P.V.	116	1,343.15	39,105	55	60	2.04	3.4
Caledonia.....	Nia.	1,456	65	5,200.46	151,892	305	44	1.49	3.4
Campbellville.....	Nia.	P.V.	96	1,362.14	26,392	40	55	2.84	5.1
Cannington.....	G.B.	849	36	4,853.42	170,647	236	61	1.72	2.8
Cardinal.....	E.O.	1,249	38	4,967.33	130,085	253	44	1.66	3.8
Cayuga.....	Nia.	661	82	2,905.53	70,580	106	59	2.42	4.1

\*Includes certain rural customers.



“D”—Continued

in Ontario Municipalities Served by the Commission  
and for Power Service during the Year 1931

VILLAGES AND SUBURBAN AREAS

however, exerts upon the economic life of the Province a most beneficial influence. It should further be appreciated that about 35 per cent. of these municipalities obtain their power, not from Niagara, but from relatively small water-power developments throughout the Province. The net cost per kilowatt-hour given in the table is the cost inclusive of all charges. Consult also introduction to Statement “D,” page 382.

Commercial light service						Power service			Total number of consumers
Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.	Revenue	Number of consumers	Average monthly horse-power	
\$ c.	kw-hr.		kw-hr.	\$ c.	cents	\$ c.			
3,487.21	167,724	84	168	3.50	2.1	17,160.37	18	678.1	582
960.47	31,285	23	119	3.64	3.1	1,876.73	3	79.5	164
1,406.28	46,398	39	100	3.04	3.0	2,821.91	3	97.6	168
4,289.70	102,475	102	81	3.40	4.2	3,121.40	15	144.8	467
2,857.27	46,611	56	68	4.14	6.1	906.15	3	20.0	213
1,697.38	79,670	39	175	3.72	2.1	623.25	5	37.0	306
814.58	15,094	18	70	3.77	5.4	299.88	1	10.2	62
1,548.92	37,523	40	82	3.40	4.1	975.07	3	26.1	141
3,849.03	67,313	85	66	3.77	5.7	1,478.94	4	46.9	262
2,308.75	38,657	47	71	4.28	6.0	1,272.66	1	38.6	178
1,768.46	78,063	45	141	3.20	2.3	1,234.38	4	39.6	242
1,430.49	58,337	33	154	3.78	2.5	4,952.44	3	201.6	166
880.77	26,248	28	80	2.67	3.4	7,433.81	4	342.8	160
2,356.39	104,698	63	143	3.22	2.3	2,114.29	10	100.7	496
2,513.06	46,578	37	108	5.82	5.4	3,596.77	6	110.1	164
1,534.34	45,485	51	86	2.91	3.4	1,418.15	4	57.5	235
6,341.53	296,614	126	203	4.33	2.1	5,066.74	12	199.9	624
849.08	28,218	25	94	1.83	3.0	2,224.56	8	84.5	185
1,800.63	39,279	49	69	3.16	4.6	779.15	4	39.6	213
999.79	27,970	42	57	2.03	3.6	2,367.12	9	95.3	202
1,360.55	56,030	49	98	2.39	2.4	878.91	5	67.0	215
3,523.25	71,292	62	96	4.74	4.9	3,358.70	8	151.0	273
4,069.17	191,338	44	371	7.89	2.1	3,903.96	5	173.0	814
1,030.59	25,599	30	76	3.07	4.0	1,073.54	4	38.0	76
1,018.37	35,383	19	173	4.99	2.9	729.64	4	31.0	128
1,745.58	48,625	39	105	3.78	3.6	934.89	4	35.6	153
4,869.22	132,553	105	105	3.86	3.7	3,283.45	11	181.0	521
2,366.11	58,347	62	80	3.23	4.0	607.88	2	22.9	271
943.69	46,925	33	115	2.31	2.0	1,786.23	4	70.5	223
592.57	14,548	21	55	2.24	4.1	1,072.05	3	44.8	79
4,518.22	167,222	87	160	4.33	2.7	2,241.53	8	92.9	400
458.93	14,391	8	150	4.78	3.2	.....	.....	.....	48
2,299.22	73,056	71	88	2.78	3.1	843.86	10	51.7	317
1,808.04	41,519	52	79	3.43	4.4	569.58	2	17.0	307
2,558.62	59,824	53	50	4.22	4.3	1,573.82	4	43.5	163

## STATEMENT

Statistics Relating to the Supply of Electric Energy to Consumers  
For Domestic Service, for Commercial Light Service

## Group III—SMALL TOWNS (less than 2,000 population),

Municipality	System	Popula- tion	Distance from nearest station supplying system	Domestic service					
				Revenue	Consumption	Number of con- sumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.
			miles	\$ c.	kw-hr.		kw-hr.	\$ c.	cts.
Chatsworth.....	G.B.	251	23	1,308.17	31,175	68	41	1.70	4.2
Chesley.....	G.B.	1,702	46	8,335.36	294,273	421	59	1.67	2.8
Chesterville.....	E.O.	1,000	44	5,215.00	202,350	221	78	2.08	2.6
Chippawa.....	Nia.	1,222	4	7,130.73	358,696	293	104	2.07	2.0
Clifford.....	Nia.	496	173	2,171.95	44,144	100	38	1.85	4.9
Clinton.....	Nia.	1,911	155	11,497.61	496,054	512	81	1.87	2.3
Coldwater.....	G.B.	563	17	2,662.98	118,586	133	75	1.70	2.3
Comber.....	Nia.	P.V.	216	2,538.42	70,718	104	58	2.07	3.6
Cookstown.....	G.B.	P.V.	65	2,191.26	28,387	100	24	1.86	7.7
Cottam.....	Nia.	P.V.	257	2,504.11	62,486	104	50	2.01	4.0
Courtright.....	Nia.	370	215	1,923.46	29,443	62	37	2.41	6.5
Creemore.....	G.B.	598	60	2,266.16	73,443	158	39	1.22	3.0
Dashwood.....	Nia.	P.V.	163	1,840.15	44,732	67	56	2.29	4.1
Delaware.....	Nia.	P.V.	137	1,327.34	24,302	50	41	2.26	5.5
Deserontot.....	E.O.	1,331	32	6,733.46	130,052	301	40	2.03	5.2
Dorchester.....	Nia.	P.V.	129	2,608.51	98,984	128	64	1.68	2.6
Drayton.....	Nia.	559	169	2,976.24	93,780	154	51	1.61	3.1
Dresden.....	Nia.	1,403	210	5,955.44	196,573	434	42	1.27	3.0
Drumbo.....	Nia.	P.V.	90	2,021.92	65,189	82	66	2.05	3.1
Dublin.....	Nia.	P.V.	140	1,246.49	30,067	37	68	2.81	4.1
Dundalk.....	G.B.	659	18	2,533.73	71,963	161	37	1.32	3.5
Durham.....	G.B.	1,744	23	5,703.53	219,329	402	46	1.20	2.6
Dutton.....	Nia.	801	152	3,354.37	136,560	403	56	1.38	2.5
Elmvale.....	G.B.	P.V.	32	2,587.82	82,707	143	50	1.55	3.1
Elmwood.....	G.B.	P.V.	40	1,067.09	18,353	56	27	1.59	5.8
Elora.....	Nia.	1,306	94	7,421.51	297,480	303	81	2.03	2.5
Embro.....	Nia.	443	107	2,808.82	76,804	98	66	2.41	3.7
Erieau.....	Nia.	202	210	3,343.46	84,503	121	60	2.34	4.0
Erie Beach*.....	Nia.	23	209	1,454.99	11,342	66	15	1.90	12.8
Essex.....	Nia.	1,880	254	8,291.80	303,432	451	56	1.54	2.7
Etobicoke Twp..	Nia.	11,034	73	78,556.69	3,378,417	2,908	97	2.25	2.3
Exeter.....	Nia.	1,606	155	11,496.96	445,708	443	84	2.17	2.6
Finch.....	E.O.	365	53	2,145.46	35,429	76	40	2.45	6.1
Flesherton.....	G.B.	448	7	2,523.69	73,872	131	48	1.64	3.4
Fonthill.....	Nia.	833	25	5,121.68	184,289	199	62	1.71	2.8
Forest.....	Nia.	1,405	256	10,568.40	362,331	453	67	2.95	2.9
Georgetown.....	Nia.	1,997	100	13,255.44	734,109	646	95	1.72	1.8
Glencoe.....	Nia.	779	229	5,411.85	137,140	220	52	2.05	3.9
Grand Valley....	G.B.	590	51	3,240.63	66,763	147	40	1.91	4.8
Granton.....	Nia.	P.V.	147	1,756.50	64,133	78	69	1.88	2.7

\*Unusual conditions. Summer resort.

†Eleven months' operation.

## "D"—Continued

in Ontario Municipalities Served by the Commission  
and for Power Service during the Year 1931

## VILLAGES AND SUBURBAN AREAS

Commercial light service						Power service			Total number of con- sumers
Revenue	Consumption	Number of con- sumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.	Revenue	Number of con- sumers	Average monthly horse- power	
\$ c.	kw-hr.		kw-hr.	\$ c.	cents	\$ c.			
1,452.21	20,007	26	58	4.17	7.2	336.09	1	11.3	95
4,314.44	175,985	104	142	3.49	2.5	9,850.36	21	376.6	546
2,304.19	69,264	57	101	3.37	3.3	2,055.97	3	68.0	281
1,679.08	102,828	33	225	3.68	1.6	1,519.44	6	57.0	332
1,483.26	37,000	39	79	3.17	4.0	124.31	1	5.0	140
5,844.46	194,989	128	131	3.84	3.0	5,725.11	15	213.8	655
1,533.38	57,353	56	84	2.26	2.7	4,389.57	4	179.9	193
2,022.69	47,877	44	89	3.75	4.2	2,633.12	3	71.8	151
1,416.85	22,400	33	53	3.37	6.3	363.59	3	16.8	136
1,588.37	63,857	33	177	4.41	2.5	380.00	1	16.7	138
979.79	17,541	22	65	3.63	5.6	936.89	2	14.2	86
1,830.17	67,117	52	105	2.85	2.7	1,315.99	4	43.9	214
1,024.65	18,959	26	62	3.35	5.4	1,335.65	1	41.3	94
774.87	18,104	20	50	3.23	4.3	.....	.....	.....	70
2,759.85	68,762	72	87	3.48	4.0	2,873.78	13	.....	387
980.67	27,242	28	76	2.72	3.6	435.67	1	26.9	157
1,908.35	49,918	61	68	2.61	3.8	1,098.45	5	50.4	220
5,107.79	172,033	116	124	3.67	3.0	5,688.86	14	214.7	564
908.90	27,075	24	94	3.16	3.4	865.77	2	28.5	108
887.64	16,505	23	55	2.96	5.4	500.72	3	20.6	63
2,252.99	66,953	73	77	2.59	3.4	2,031.53	3	107.2	237
4,000.06	136,205	110	108	3.17	2.9	10,613.44	13	424.4	525
2,563.78	95,042	71	112	3.01	2.7	3,266.15	7	145.4	281
1,809.15	58,466	56	87	2.69	3.1	3,325.73	10	164.5	209
551.90	11,177	18	49	2.42	4.9	1,263.07	1	29.8	75
3,658.17	111,939	75	123	4.01	3.3	7,980.93	3	346.0	381
1,767.87	37,164	47	66	3.13	4.8	1,446.67	2	43.9	147
1,060.49	28,908	13	201	7.36	3.7	895.54	2	37.4	136
197.18	2,974	3	83	5.48	6.6	.....	.....	.....	69
5,817.00	225,344	102	271	4.41	2.6	6,943.83	20	284.9	573
16,970.15	890,853	269	276	5.25	1.9	15,588.91	21	716.0	3,198
5,313.84	194,203	119	136	3.72	2.7	5,512.53	10	234.5	572
1,634.84	25,647	34	63	4.01	6.4	1,008.58	1	24.8	111
1,718.51	35,836	44	67	3.22	4.8	904.97	2	50.6	177
827.89	39,834	28	123	2.56	2.1	539.52	4	26.2	231
5,129.94	149,680	131	97	3.34	3.4	5,254.19	23	185.1	607
5,666.15	278,719	126	181	3.69	2.0	21,355.32	24	997.9	796
3,561.05	95,798	83	99	3.66	3.7	3,372.69	6	114.2	309
2,522.17	55,001	53	89	4.08	4.6	1,692.06	2	60.0	202
1,059.15	36,748	32	97	2.76	2.9	948.32	1	38.2	111



## STATEMENT

**Statistics Relating to the Supply of Electric Energy to Consumers  
For Domestic Service, for Commercial Light Service**

**Group III—SMALL TOWNS (less than 2,000 population),**

Municipality	System	Popula- tion	Distance from nearest generating station supplying system	Domestic service					
				Revenue	Consumption	Number of con- sumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.
			miles	\$ c.	kw-hr.		kw-hr.	\$ c. cts.	
Gravenhurst....	G.B.	1,822	7	8,633.10	473,787	439	93	1.70	1.8
Hagersville.....	Nia.	1,265	75	4,707.60	295,646	300	82	1.31	1.6
Harriston.....	Nia.	1,325	167	7,045.09	241,634	321	64	1.86	2.9
Harrow.....	Nia.	830	267	8,298.58	390,211	228	148	3.14	2.1
Hastings*.....	E.O.	709	15	2,488.86	35,514	160	.....	.....	.....
Havelock.....	E.O.	1,142	25	6,616.63	153,841	283	45	1.96	4.3
Hensall.....	Nia.	727	161	4,240.10	142,949	177	68	2.02	3.0
Highgate.....	Nia.	315	217	1,726.12	39,285	97	34	1.50	4.4
Holstein.....	G.B.	P.V.	34	1,340.81	11,691	55	19	2.13	11.5
Humberstone....	Nia.	1,926	22	9,399.77	395,389	500	67	1.60	2.4
Jarvis.....	Nia.	479	81	1,839.80	43,913	105	37	1.55	4.2
Kemptville.....	E.O.	1,227	62	6,882.24	196,597	305	54	1.90	3.5
Kirkfield.....	G.B.	P.V.	35	803.01	13,498	27	42	2.48	5.9
Lakefield.....	E.O.	1,428	8	6,685.57	213,092	303	58	1.83	3.1
Lambeth.....	Nia.	P.V.	130	3,841.48	119,585	110	91	3.52	3.2
Lanark.....	E.O.	592	21	2,431.42	49,142	133	32	1.57	4.9
Lancaster.....	E.O.	560	25	1,981.95	28,856	78	32	2.19	6.9
La Salle.....	Nia.	574	248	8,604.20	313,355	206	129	3.55	2.7
Long Branch....	Nia.	4,016	73	21,399.24	1,107,660	1,045	88	1.71	1.9
London Twp....	Nia.	.....	128	10,111.79	341,506	314	94	2.77	2.8
Lucan.....	Nia.	588	141	4,906.53	186,436	171	92	2.42	2.6
Lucknow.....	G.B.	1,115	68	7,036.08	127,851	270	41	2.23	5.4
Lynden.....	Nia.	P.V.	62	2,080.68	81,191	77	88	2.25	2.6
Madoc.....	E.O.	1,019	25	4,567.37	106,937	257	34	1.45	4.3
Markdale.....	G.B.	812	7	3,650.03	121,558	184	55	1.64	3.0
Markham.....	Nia.	931	114	5,964.01	199,703	270	64	1.90	3.0
Marmora.....	E.O.	1,013	20	3,503.36	72,891	193	32	1.53	4.8
Martintown....	E.O.	P.V.	14	911.31	16,098	35	39	2.23	5.7
Maxville.....	E.O.	742	26	3,240.62	44,278	140	26	1.92	7.3
Merlin.....	Nia.	P.V.	219	2,177.14	48,587	106	39	1.74	4.5
Milton.....	Nia.	1,775	88	11,157.44	455,941	460	83	2.03	2.4
Milverton.....	Nia.	981	139	5,277.04	252,364	228	96	2.00	2.1
Mitchell.....	Nia.	1,593	135	10,399.31	499,893	434	95	1.97	2.1
Moorefield.....	Nia.	P.V.	168	785.16	16,151	54	27	1.33	5.0
Mt. Brydges....	Nia.	P.V.	141	2,657.36	104,104	129	66	1.68	2.6
Mt. Forest.....	G.B.	1,888	38	7,142.33	317,680	446	61	1.37	2.2
Neustadt.....	G.B.	460	40	2,239.29	33,312	97	20	1.95	9.6
Newbury.....	Nia.	291	223	1,183.08	25,995	60	36	1.64	4.6
New Hamburg...	Nia.	1,409	106	10,106.52	475,623	340	116	2.47	2.1
Niagara-on-the- Lake.....	Nia.	1,633	13	14,989.27	713,619	467	129	2.72	2.1

\* Six months' operation.

## “D”—Continued

in Ontario Municipalities Served by the Commission  
and for Power Service during the Year 1931

## VILLAGES AND SUBURBAN AREAS

Commercial light service						Power service			Total number of con- sumers
Revenue	Consumption	Number of con- sumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.	Revenue	Number of con- sumers	Average monthly horse- power	
\$ c.	kw-hr.		kw-hr.	\$ c.	cents	\$ c.			
6,013.60	259,619	96	234	5.42	2.3	7,585.86	13	410.7	548
4,680.82	251,319	109	194	3.58	1.9	23,176.75	16	1,241.4	425
4,341.34	138,110	95	120	3.77	3.1	5,689.99	13	246.7	429
4,563.08	178,411	77	193	4.94	2.6	4,685.17	5	210.3	310
1,084.30	13,014	50	.....	.....	.....	455.00	5	.....	215
1,936.93	43,689	60	62	2.74	4.4	5,966.77	3	177.7	346
2,016.11	60,836	59	87	2.95	3.3	2,644.16	13	109.0	249
1,156.92	34,149	34	84	2.85	3.4	1,523.25	6	63.3	137
627.73	6,502	19	30	2.91	9.7	298.82	1	7.5	75
2,870.47	169,088	69	199	3.37	1.7	2,651.46	7	103.0	576
1,457.80	53,658	38	118	3.20	2.7	4,178.44	4	146.5	147
4,093.38	129,169	86	128	4.06	3.2	5,040.38	7	181.0	398
962.48	21,942	18	96	4.22	4.4	429.92	1	20.0	46
4,568.63	138,656	74	150	4.94	3.3	2,776.71	8	156.0	385
1,370.74	52,450	23	208	5.44	2.6	308.43	1	8.0	134
1,283.96	27,560	35	66	3.06	4.7	72.25	1	2.0	169
2,072.54	31,296	43	62	4.11	6.6	1,668.44	1	27.6	122
2,430.77	85,398	22	274	7.79	2.8	2,667.74	4	74.9	232
6,138.56	351,026	115	254	4.45	1.8	1,828.91	4	91.1	1,164
1,830.00	78,632	17	437	10.17	2.3	1,359.84	3	47.0	334
1,798.88	50,885	44	92	3.26	3.5	1,671.85	9	77.7	224
3,006.48	61,902	86	60	2.95	4.9	3,320.45	6	103.0	362
806.98	36,088	18	167	3.74	2.2	831.46	1	39.9	96
3,397.84	80,510	86	73	3.08	4.2	1,247.49	6	87.0	349
2,733.20	77,026	76	82	2.92	3.5	995.07	9	82.1	269
2,620.73	82,232	65	108	3.44	3.2	4,357.91	9	162.8	344
1,590.74	36,424	48	64	2.80	4.4	153.01	2	12.0	243
992.60	12,069	23	44	3.60	8.2	.....	.....	.....	58
2,110.28	36,165	43	66	2.86	5.8	259.31	1	4.0	184
1,422.02	39,686	44	79	2.82	3.6	2,993.35	2	97.9	152
5,218.88	181,711	101	152	4.37	2.9	23,736.48	23	935.9	584
2,535.67	97,076	77	108	2.82	2.6	5,103.32	8	233.8	313
4,585.23	190,483	106	146	3.51	2.4	5,007.66	21	269.0	561
695.88	11,408	28	32	1.93	6.2	1,335.09	2	44.5	84
1,081.82	23,625	43	51	2.31	4.6	933.94	3	32.1	175
5,415.29	245,900	141	145	3.20	2.2	4,953.61	12	249.0	599
1,273.77	17,515	28	53	3.86	7.3	105.38	2	2.7	127
976.48	20,326	28	61	2.91	4.8	735.25	2	34.0	90
4,126.08	164,728	89	152	3.82	2.5	3,724.04	12	192.3	441
3,351.88	129,016	72	146	3.80	2.6	2,558.33	10	89.1	549

## STATEMENT

**Statistics Relating to the Supply of Electric Energy to Consumers  
For Domestic Service, for Commercial Light Service**

**Group III—SMALL TOWNS (less than 2,000 population)**

Municipality	System	Popula- tion	Distance from nearest station supplying system	Domestic service					
				Revenue	Consumption	Number of con- sumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.
			miles	\$ c.	kw-hr.		kw-hr.	\$ c.	cts.
Nipigon.....	T.B.	P.V.	14	2,238.32	56,929	125	40	1.59	4.0
Norwich.....	Nia.	1,101	110	7,292.19	398,479	352	95	1.74	1.8
Norwood.....	E.O.	756	10	4,916.11	116,315	211	46	1.95	4.2
Oil Springs.....	Nia.	445	226	1,556.30	40,252	70	48	1.85	3.9
Omeme.....	E.O.	489	15	2,386.27	63,427	127	42	1.57	3.8
Otterville.....	Nia.	P.V.	115	2,145.17	74,102	105	58	1.67	2.9
Paisley.....	G.B.	716	56	3,708.92	64,575	175	31	1.30	4.2
Palmerston.....	Nia.	1,758	161	10,748.18	505,884	400	105	2.24	2.1
Parkhill.....	Nia.	968	157	4,971.66	120,660	231	44	1.82	4.1
Plattsville.....	Nia.	P.V.	96	2,415.17	50,060	91	47	2.29	4.8
Point Edward...	Nia.	1,232	209	5,985.38	212,191	298	60	1.70	2.8
Port Credit.....	Nia.	1,600	69	12,320.51	715,500	370	155	2.67	1.7
Port Dalhousie...	Nia.	1,555	21	13,107.77	864,530	580	125	1.89	1.5
Port Dover.....	Nia.	1,625	108	7,408.24	242,356	458	47	1.44	3.1
Port Elgin†.....	G.B.	1,203	6	5,451.01	201,563	355	.....	.....	.....
Port McNicoll...	G.B.	825	21	2,903.37	76,819	179	37	1.42	3.9
Port Perry.....	G.B.	1,288	58	6,623.52	188,756	301	54	1.91	3.5
Port Rowan.....	Nia.	558	124	2,895.98	56,381	85	54	2.77	5.1
Port Stanley*...	Nia.	693	146	11,425.91	461,740	575	67	1.67	2.5
Priceville.....	G.B.	P.V.	12	661.15	8,358	27	24	1.93	7.9
Princeton.....	Nia.	P.V.	96	2,260.98	59,241	84	60	2.30	3.8
Queenston.....	Nia.	P.V.	7	2,663.79	125,971	68	157	3.31	2.1
Richmond.....	E.O.	367	19	1,647.50	34,693	45	65	3.09	4.7
Richmond Hill...	Nia.	1,197	103	6,968.21	307,301	332	79	1.79	2.3
Ridgetown.....	Nia.	1,981	211	9,562.03	405,360	547	62	1.46	2.4
Ripley.....	G.B.	410	69	2,859.52	43,733	120	32	2.09	6.5
Rockwood.....	Nia.	P.V.	87	3,134.96	142,449	145	84	1.84	2.2
Rodney.....	Nia.	690	163	3,140.19	96,808	195	42	1.37	3.3
Rosseau†.....	G.B.	230	37	957.07	9,083	48	.....	.....	.....
Russell.....	E.O.	P.V.	58	2,682.04	43,331	106	35	2.14	6.2
St. Clair Beach..	Nia.	115	247	2,325.44	91,966	49	153	3.88	2.5
St. George.....	Nia.	P.V.	82	2,733.14	133,169	130	85	1.75	2.1
St. Jacobs.....	Nia.	P.V.	102	3,221.42	179,130	107	141	2.53	1.8
Scarboro Twp...	Nia.	.....	87	85,225.70	3,917,352	4,210	80	1.75	2.2
Seaforth.....	Nia.	1,689	147	10,262.81	483,212	478	83	1.76	2.1
Shelburne.....	G.B.	1,138	31	5,511.37	193,300	289	56	1.59	2.8
Southampton§...	G.B.	1,700	3	7,234.09	154,597	393	.....	.....	.....
Springfield.....	Nia.	404	151	1,770.18	50,321	93	45	1.59	3.5
Stamford Twp...	Nia.	.....	2	52,154.47	3,131,028	1,633	164	2.73	1.7
Stayner.....	G.B.	949	53	3,998.71	171,659	232	63	1.47	2.3

†Nine months' operation.

§Ten months' operation.

\*Summer consumers included.

† Less than five months' operation.



## "D"—Continued

in Ontario Municipalities Served by the Commission  
and for Power Service during the Year 1931

## VILLAGES AND SUBURBAN AREAS

Commercial light service						Power service			Total number of con- sumers
Revenue	Consumption	Number of con- sumers	Average monthly consumption	Average monthly bill	Net cost per kw.-hr.	Revenue	Number of con- sumers	Average monthly horse- power	
\$ c.	kw.-hr.		kw.-hr.	\$ c.	cents	\$ c.			
1,814.49	51,997	39	113	3.93	3.5	.....	.....	.....	164
2,633.84	109,793	77	113	2.71	2.4	2,896.15	7	97.2	436
2,796.72	46,512	64	60	3.60	6.0	3,064.22	3	111.0	278
1,034.42	25,810	28	74	2.97	4.0	7,460.78	27	206.9	125
1,219.79	29,926	41	61	2.48	4.1	303.03	6	18.1	174
1,581.99	49,978	42	102	3.22	3.2	692.75	3	25.1	150
2,681.92	72,878	51	108	3.99	3.7	1,325.23	4	34.5	230
5,427.90	227,696	97	190	4.52	2.4	6,444.66	9	359.1	506
2,862.53	65,880	75	73	3.18	4.3	1,535.44	5	70.5	311
897.70	19,248	24	64	2.99	4.7	801.85	1	24.1	116
1,751.49	59,259	45	118	3.48	3.0	17,221.19	12	795.6	355
5,051.02	253,660	75	286	5.69	1.9	1,747.14	5	90.2	450
2,099.69	111,069	46	193	3.65	1.9	4,219.28	11	229.0	637
4,805.31	158,509	128	102	3.08	3.0	5,398.07	11	217.6	597
3,219.82	71,032	83	.....	.....	.....	3,115.14	9	148.0	447
437.30	13,196	24	48	1.58	3.3	.....	.....	.....	203
2,652.99	47,327	102	45	2.54	5.6	3,907.73	13	141.4	416
1,989.93	34,996	34	86	4.88	5.7	132.97	1	3.5	120
3,497.21	86,973	80	93	3.74	4.0	4,146.92	13	144.5	668
393.91	4,824	8	47	3.86	8.2	.....	.....	.....	35
629.46	17,213	17	84	3.08	3.7	3,100.61	3	108.0	104
236.68	5,511	7	71	3.03	4.3	813.42	1	25.0	76
1,568.52	31,178	25	108	5.45	5.0	.....	.....	.....	70
3,495.22	151,320	63	197	4.55	2.3	2,663.61	12	129.2	407
5,211.84	198,052	135	114	3.00	2.6	5,377.38	22	304.5	704
2,001.53	25,872	44	48	3.70	7.7	.....	.....	.....	164
1,322.63	50,835	33	128	3.34	2.6	335.21	1	12.6	179
2,739.18	93,221	75	104	3.04	2.9	1,669.73	5	83.7	275
487.83	4,490	21	.....	.....	.....	.....	.....	.....	69
1,442.38	22,862	35	56	3.54	6.3	558.52	1	10.2	142
1,388.82	41,983	10	350	11.57	3.3	518.72	2	16.5	61
783.10	29,300	30	76	2.04	2.7	2,031.86	3	76.5	163
1,241.10	46,248	25	154	4.14	2.7	1,743.45	6	69.3	138
18,389.04	844,740	334	214	4.66	2.2	23,595.13	36	947.4	4,580
5,599.77	228,612	113	163	3.99	2.4	5,529.50	14	275.1	605
3,585.26	113,100	93	102	3.25	3.2	2,111.02	10	129.3	392
3,487.26	99,703	85	.....	.....	.....	4,494.17	13	171.0	491
750.55	16,032	34	40	1.84	4.7	1,977.26	4	68.3	131
7,229.50	444,292	115	343	5.58	1.6	5,758.99	12	236.8	1,760
2,687.23	100,622	74	113	3.03	2.7	2,930.17	11	157.0	317

## STATEMENT

Statistics Relating to the Supply of Electric Energy to Consumers  
For Domestic Service, for Commercial Light Service

Group III—SMALL TOWNS (less than 2,000 population),

Municipality	System	Popula- tion	Distance from nearest generating station supplying system	Domestic service					
				Revenue	Consumption	Number of con- sumers	Average monthly consump- tion	Average monthly bill	Net cost per kw-hr.
			miles	\$ c.	kw-hr.		kw-hr.	\$ c.	cts.
Stirling.....	E.O.	822	19	5,822.08	306,580	270	96	1.81	1.9
Stouffville.....	Nia.	1,070	110	6,751.53	210,488	316	54	1.82	3.4
Sunderland.....	G.B.	P.V.	44	2,079.71	37,600	103	30	1.68	5.5
Sutton.....	Nia.	831	114	7,837.57	182,895	374	41	1.77	4.3
Tara.....	G.B.	455	34	2,937.84	56,732	126	39	2.01	5.2
Tavistock.....	Nia.	959	129	7,101.24	378,437	258	124	2.32	1.9
Teeswater.....	G.B.	835	58	4,470.92	81,488	208	33	1.80	5.5
Thamesford.....	Nia.	P.V.	136	2,369.93	94,097	117	59	1.69	2.5
Thamesville.....	Nia.	884	207	4,066.23	161,663	214	63	1.59	2.5
Thedford.....	Nia.	539	268	2,732.81	43,819	130	28	1.77	6.2
Thorndale.....	Nia.	P.V.	136	1,601.92	36,948	62	47	2.05	4.3
Thornton.....	G.B.	P.V.	58	1,290.02	17,534	51	29	2.11	7.4
Tilbury.....	Nia.	1,905	209	6,444.53	250,853	430	50	1.27	2.6
Toronto Twp.....	Nia.	.....	67	53,851.71	3,112,451	1,732	153	2.64	1.7
Tottenham.....	G.B.	538	82	3,143.28	42,875	118	30	2.22	7.4
Trafalgar Twp., No. 1.....	Nia.	.....	.....	14,088.59	552,378	271	177	4.51	2.6
Trafalgar Twp., No. 2*.....	Nia.	.....	.....	4,187.75	141,236	110	109	3.23	2.9
Tweed.....	E.O.	1,206	41	6,675.53	136,841	238	48	3.34	7.0
Uxbridge.....	G.B.	1,482	60	7,488.43	255,806	341	64	1.89	2.9
Victoria Harbour.	G.B.	950	17	2,675.12	80,717	157	43	1.43	3.3
Wardsville.....	Nia.	209	225	1,040.25	18,249	52	29	1.67	5.7
Warkworth.....	E.O.	P.V.	17	2,089.84	31,806	100	28	1.82	6.6
Waterdown.....	Nia.	917	57	6,268.64	312,156	220	120	2.41	2.0
Waterford.....	Nia.	1,091	94	7,162.68	434,335	316	116	1.91	1.6
Watford.....	Nia.	977	256	6,428.39	176,100	275	54	1.96	3.7
Waubashene.....	G.B.	P.V.	12	1,947.47	73,458	123	51	1.28	2.5
Wellesley.....	Nia.	P.V.	111	2,818.32	94,196	126	64	1.91	3.0
Wellington.....	E.O.	900	22	4,467.61	169,151	281	52	1.36	2.6
West Lorne.....	Nia.	741	159	3,389.60	97,517	195	42	1.46	3.5
Wheatley.....	Nia.	748	279	4,523.52	122,715	184	67	2.05	3.7
Warton.....	G.B.	1,880	33	5,983.06	103,530	353	.....	.....	.....
Williamsburg.....	E.O.	P.V.	28	1,893.40	73,148	55	111	2.87	2.6
Winchester.....	E.O.	970	38	5,837.42	272,018	270	83	1.79	2.1
Windermere.....	G.B.	124	22	2,134.94	23,610	44	45	4.09	9.0
Woodbridge.....	Nia.	737	85	5,414.99	256,816	214	96	2.02	2.1
Woodville.....	G.B.	403	40	2,082.21	54,299	103	44	1.70	3.8
Wyoming.....	Nia.	473	239	2,040.75	48,179	128	32	1.37	4.2
York, East, Twp.	Nia.	.....	86	166,304.83	7,834,978	8,430	79	1.67	2.1
York, North, Twp	Nia.	.....	84	82,076.06	3,493,066	2,539	122	2.88	2.4
Zurich.....	Nia.	.....	168	3,131.39	85,442	119	60	2.19	3.7

\*Trafalgar Twp. zone No. 2 population included in Zone No. 1. †Seven months' operation.

# “D”—Concluded

in Ontario Municipalities Served by the Commission  
and for Power Service during the Year 1931

## VILLAGES AND SUBURBAN AREAS

Commercial light service						Power service			Total number of con- sumers
Revenue	Consumption	Number of con- sumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.	Revenue	Number of con- sumers	Average monthly horse- power	
\$ c.	kw-hr.		kw-hr.	\$ c.	cents	\$ c.			
3,940.62	154,824	84	148	3.77	2.5	2,727.01	11	100.7	365
2,601.24	77,634	81	79	2.64	3.4	1,160.04	5	56.0	402
1,850.59	40,639	43	83	3.76	4.6	79.44	2	5.5	148
3,235.45	77,946	77	87	3.59	4.2	1,368.98	5	39.6	456
1,723.28	26,567	40	55	3.55	6.5	936.07	4	30.1	170
2,123.46	89,078	76	98	2.36	2.4	8,371.90	5	323.8	339
2,317.54	49,692	55	72	3.36	4.7	1,223.08	9	64.8	272
1,430.28	63,182	39	139	3.14	2.3	2,897.36	8	84.5	164
3,455.08	116,805	76	123	3.64	3.0	1,817.97	8	91.6	366
1,726.77	33,012	38	69	4.01	5.2	445.52	2	23.2	170
1,137.08	29,407	25	91	3.51	3.9	233.64	1	5.4	88
625.17	11,135	15	55	3.06	5.6	292.76	2	15.7	68
6,327.54	237,296	136	146	3.91	2.7	9,193.75	14	529.5	580
13,933.95	855,176	178	437	7.14	1.6	5,288.48	22	278.7	1,932
2,324.55	29,343	51	47	3.76	8.0	670.42	6	29.1	175
609.71	16,132	2	672	25.40	2.8	649.04	10	40.0	283
1,505.51	64,684	19	317	7.38	2.3	.....	.....	.....	120
5,231.09	103,000	81	106	5.38	5.0	4,584.98	11	172.2	330
3,482.29	94,561	95	81	2.99	3.7	1,113.30	12	69.0	448
876.96	31,379	28	95	2.68	2.9	161.83	2	6.0	187
1,173.74	21,589	25	72	3.91	5.4	289.82	1	15.0	78
1,520.25	24,189	42	49	3.05	6.3	.....	.....	.....	142
1,446.86	80,848	32	225	4.02	1.8	2,644.19	7	120.0	259
1,817.95	105,135	69	125	2.16	1.7	3,893.43	10	213.5	395
3,503.88	97,410	79	101	3.65	3.6	2,661.73	5	79.0	359
503.16	21,097	19	95	2.27	2.4	636.57	6	29.1	148
893.00	30,194	29	79	2.33	3.0	1,693.99	3	60.3	158
1,903.99	65,943	61	90	2.60	2.9	2,895.63	8	98.7	350
1,772.02	64,709	52	102	2.79	2.7	4,672.87	5	173.7	252
2,936.43	71,024	65	91	3.82	4.1	2,473.76	4	85.7	253
4,222.20	81,551	108	.....	.....	.....	2,728.30	11	138.0	472
865.49	26,671	22	108	3.52	3.2	219.39	1	13.8	78
3,127.61	117,485	65	151	4.01	2.7	1,171.25	2	34.0	337
910.32	12,608	9	131	9.48	7.2	.....	.....	.....	53
1,582.12	62,012	46	112	2.87	2.6	4,477.00	7	197.0	267
1,119.42	24,143	30	67	3.11	4.6	858.42	3	39.6	136
1,375.04	30,917	47	55	2.44	4.4	90.34	2	9.5	177
20,851.31	1,005,856	367	231	4.78	2.1	41,722.65	36	1,873.0	8,833
11,795.05	416,798	208	174	4.94	2.8	24,783.47	36	989.0	2,783
1,982.98	47,936	46	83	3.44	4.2	.....	.....	.....	165



## STATEMENT "E"

### Cost of Power to Municipalities and Rates to Consumers for Domestic Service—Commercial Light Service—Power Service in Urban Municipalities Served by the Hydro-Electric Power Commission for the Year 1931

In Statement "E" are presented the rate schedules applicable to consumers for domestic service, for commercial light service and for power service in each of the co-operating municipalities receiving service at cost through the Hydro-Electric Power Commission.\* The cost per horsepower of the power supplied at wholesale by the Commission to the municipality, which is an important factor in determining the rates to consumers, is also stated.

#### Cost of Power to Municipalities

The figures of the first column in the table represented the total cost for the year of the power supplied by the Commission to the municipality, divided by the number of horsepower supplied. Details respecting these costs are given in the "Cost of Power" tables relating to the several systems, as presented in Section IX, and an explanation of the items making up the cost of power is given in the introduction to that Section.

#### Rates to Consumers

The Power Commission Act stipulates that "The rates chargeable by any municipal corporation generating or receiving and distributing electrical power or energy shall at all times be subject to the approval and control of the Commission." In accordance with the Act and in pursuance of its fundamental principle of providing service at cost, the Commission requires that accurate cost records be kept in each municipality, and exercises a continuous supervision over the rates charged to consumers.

From the commencement of its operations, the Commission introduced in the municipalities which it serves, scientifically-designed rate schedules for each of the three main classes into which the electrical service is usually divided, namely: residential or domestic service, commercial light service, and power service, and the schedules in use during the past year are presented in the tables of this statement.

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\*Except townships served as parts of rural power districts, for which consult latter part of Section III.

*Domestic Service:* Domestic rates apply to electrical service in residences, for all household purposes, including lighting, cooking and the operation of all domestic appliances.

*Commercial Light Service:* Electrical energy used in stores, offices, churches, schools, public halls and institutions, hotels, public boarding-houses, and in all other premises for commercial purposes, including sign and display lighting, is billed at commercial lighting rates.

*Power Service:* The rate schedules given for power service in Statement "E" are those governing the supply of power at retail by each of the local municipal utilities. The average amount of power sold, per consumer, under these rates is approximately 40 horsepower—consult Statement "D." The Commission serves certain large power consumers direct on behalf of the various systems of municipalities.

The rates for power service, as given in the tables, are the rates for 24-hour unrestricted power at secondary distribution voltage. For service at primary distribution voltage the rates are usually five per cent lower than those stated. In municipalities where the load conditions and other circumstances permit, lower rates are available for 10-hour power, and for other forms of restricted service. For these classifications, discounts additional to those listed in the table are applicable.

The service charge relates to the connected load or to the maximum demand, as measured by a 10-minute average peak, where a demand meter is installed. The prompt payment discount of 10 per cent on the total monthly bill is given for settlement within 10 days.

Under the tabulation of rates for power service there is a column headed "Basis of rate 130 hours monthly use of demand." This column shows approximately the net annual amount payable for a demand of one horsepower, assuming a monthly use of 130 hours, which includes 30 hours' use each month at the third energy rate. Broadly, the figures in this column serve to indicate approximately the relative cost of power service in the different municipalities listed.

## STATEMENT

**Cost of Power to Municipalities and Rates to Consumers for  
for the Year 1931, in Urban Municipalities**

Municipality	Annual cost to the Commission on the works to serve electrical energy to municipality on a horse power basis	Domestic service					
		Service charge per month	First rate		All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount
			Number of kw-hr. per month	Per kw-hr. per month			
	\$ c.	cents		cents	cents	\$ c.	%
Acton.....	32.23	33-66	60	2.2	1.1	0.83	10
Agincourt.....	37.30	33-66	50	4.	2.	1.11	10
Ailsa Craig.....	45.36	33-66	55	3.5	1.5	0.83	10
Alexandria.....	62.03	33-66	60	5	2	1.11	10
Alliston.....	56.93	33-66	40	4.5	2	1.39	10
Alvinston.....	83.27	33-66	60	6	2	2.22	10
Amherstburg.....	35.95	33-66	55	3	1.5	0.83	10
Ancaster twp.....	29.37	33-66	55	3	1.5	0.83	10
Apple Hill.....	56.30	33-66	60	6	2	1.66	10
Arkona.....	72.31	33-66	55	5	2	1.66	10
Arthur.....	74.98	33-66	40	6	2	1.67	10
Athens.....	48.61	33-66	40	6	2	2.78	10
Aylmer.....	34.39	33-66	60	2.4	1.2	0.83	10
Ayr.....	31.35	33-66	60	2.5	1.25	1.11	10
Baden.....	31.05	33-66	60	2.5	1.25	0.83	10
Barrie.....	35.44	33-66	60	2	1	0.83	10
Beachville.....	30.73	33-66	55	3	1.5	0.83	10
Beaverton.....	42.12	33-66	60	2.5	1.25	1.11	10
Beeton.....	69.27	33-66	35	7	2	1.67	10
Belle River.....	36.98	33-66	55	3.5	1.5	1.11	10
Belleville.....	31.51	33-66	60	2.5	1.25	0.83	10
Blenheim.....	37.99	33-66	60	2.5	1.25	0.83	10
Bloomfield.....	56.97	33-66	50	3	1.5	0.83	10
Blyth.....	56.12	33-66	50	4	2	1.66	10
Bolton.....	44.80	33-66	55	3	1.5	1.11	10
Bothwell.....	44.92	33-66	60	2.5	1.25	0.83	10
Bradford.....	68.59	33-66	35	5.5	2	1.67	10
Brampton.....	28.14	33-66	60	2	1	0.83	10
Brantford.....	25.96	33-66	60	2	1	0.83	10
Brantford twp.....	28.90	33-66	60	2.5	1.25	1.11	10
Brechin.....	56.97	33-66	45	5	2	1.67	10
Bridgeport.....	33.99	33-66	55	3	1.5	0.83	10
Brigden.....	61.59	33-66	60	4	2	1.38	10
Brighton.....	40.51	33-66	60	5	2	1.11	10
Brockville.....	29.46	33-66	50	2	1	0.83	10
Brussels.....	52.10	33-66	50	4.5	2	1.66	10
Burford.....	31.62	33-66	60	2.5	1.25	1.11	10
Burgessville.....	43.92	33-66	50	4	2	1.11	10
Caledonia.....	28.89	33-66	60	2.5	1.25	0.83	10
Campbellville.....	59.37	33-66	40	6	2	2.22	10

NOTE.—Domestic service charge—33 cents per month per service when the permanently installed appliance load is under 2,000 watts and 66 cents per month when over 2,000 watts.



“E”

Domestic Service—Commercial Light Service—Power Service  
Served by the Hydro-Electric Power Commission

Commercial light service					Power service							
Service charge per 100 watts min. 1000 watts	First 100 hrs per month per kw-hr.	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount	Basis of rate 130 hours monthly use of demand	Service charge per h.p. per month	First 50 hr. per month per kw-hr.	Second 50 hr. per month per kw-hr.	All additional per kw-hr.	Minimum or maximum per h.p. per month	Local discount	Prompt payment discount
cents	cents	cents	\$ c.	%	\$ c.	\$ c.	cents	cents	cents	\$ c.	%	%
5	2.2	0.6	0.83	10	25.00	1.00	2	1.3	0.33	.....	.....	10
5	4	1	1.11	10	32.00	1.00	3.1	2	0.33	.....	.....	10
5	3.5	0.75	0.83	10	32.00	1.00	3.1	2	0.33	.....	.....	10
5	5	1	1.66	10	40.00	1.00	4.3	2.8	0.33	.....	.....	10
5	4.5	1	1.39	10	35.00	1.00	3.5	2.3	0.33	.....	.....	10
7.5	6	1	2.22	10	59.00	1.00	7.1	4.7	0.33	min. 3.00	.....	10
5	3	0.75	0.83	10	35.00	1.00	3.5	2.3	0.33	.....	.....	10
5	3	0.75	0.83	10	31.00	1.00	2.9	1.9	0.33	.....	.....	10
5	6	1	2.22	10	55.00	1.00	6.5	4.3	0.33	.....	.....	10
7.5	5	1	1.66	10	55.00	1.00	6.5	4.3	0.33	.....	.....	10
5	6	1	1.67	10	50.00	1.00	5.7	3.8	0.33	.....	.....	10
5	6	1	2.78	10	60.00	1.00	7.2	4.8	0.33	.....	.....	10
5	2.4	0.6	0.83	10	26.00	1.00	2.2	1.4	0.33	.....	.....	10
5	2.5	0.75	1.11	10	38.00	1.00	4	2.6	0.33	.....	.....	10
5	2.5	0.75	0.83	10	26.00	1.00	2.2	1.4	0.33	.....	.....	10
5	2	1	0.83	10	18.00	1.00	1.9	1.2	0.33	.....	25	10
5	3	0.75	0.83	10	21.00	1.00	1.8	1.1	0.33	.....	10	10
5	2.5	1	1.11	10	25.00	1.00	2	1.3	0.33	.....	.....	10
5	7	1	1.67	10	38.00	1.00	4	2.6	0.33	.....	.....	10
5	3.5	0.75	1.11	10	35.00	1.00	3.5	2.3	0.33	.....	.....	10
5	2.5	1	0.83	10	20.00	1.00	1.6	1	0.33	.....	10	10
5	2.5	0.75	0.83	10	34.00	1.00	3.4	2.2	0.33	.....	.....	10
5	3	1	0.83	10	45.00	1.00	4.9	3.3	0.33	.....	.....	10
5	4	1	1.66	10	55.00	1.00	6.5	4.3	0.33	.....	.....	10
5	3	1	1.11	10	36.00	1.00	3.7	2.4	0.33	.....	.....	10
5	2.5	0.75	0.83	10	38.00	1.00	4	2.6	0.33	.....	.....	10
5	5.5	1	1.67	10	38.00	1.00	4	2.6	0.33	.....	.....	10
5	2	0.75	0.83	10	18.00	1.00	1.9	1.2	0.33	.....	25	10
	*3.5	0.35	0.83	10	23.00	1.00	2.1	1.4	0.33	.....	10	10
	**1.75											
5	2.5	0.75	1.11	10	24.00	1.00	2.3	1.5	0.33	.....	10	10
5	5	1	1.67	10	45.00	1.00	4.9	3.3	0.33	.....	.....	10
5	3	0.75	0.83	10	32.00	1.00	3.1	2	0.33	.....	.....	10
5	4	0.75	1.38	10	48.00	1.00	5.4	3.6	0.33	.....	.....	10
5	5	1	1.11	10	30.00	1.00	2.8	1.8	0.33	.....	.....	10
5	2	0.75	0.83	10	21.00	1.00	1.8	1.1	0.33	.....	10	10
5	4.5	1	1.66	10	50.00	1.00	5.7	3.8	0.33	.....	.....	10
5	2.5	0.75	1.11	10	35.00	1.00	3.5	2.3	0.33	.....	.....	10
5	4	1	1.11	10	35.00	1.00	3.5	2.3	0.33	min. 2.22	.....	10
5	2.5	0.75	0.83	10	26.00	1.00	2.2	1.4	0.33	.....	.....	10
5	6	1	2.22	10	50.00	1.00	5.7	3.8	0.33	.....	.....	10

\*First 30 hours per kw-hr.  
\*\*Next 70 hours per kw-hr.

## STATEMENT

**Cost of Power to Municipalities and Rates to Consumers for  
for the Year 1931, in Urban Municipalities**

Municipality	Annual cost to the Commission on the works to serve electrical energy to municipality on a horse power basis	Domestic service					
		Service charge per month	First rate		All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount
			Number of kw-hr. per month	Per kw-hr. per month			
	\$ c.	cents		cents	cents	\$ c.	%
Cannington.....	44.11	33-66	55	3	1.5	1.11	10
Cardinal.....	35.23	33-66	50	3.5	2	1.39	10
Carleton Place.....	31.07	33-66	50	4	2	0.83	10
Cayuga.....	44.54	33-66	45	5	2	1.66	10
Chatham.....	28.54	33-66	60	2.5	1.11	0.83	10
Chatsworth.....	44.82	33-66	40	5.5	2	1.67	10
Chesley.....	37.30	33-66	55	3	1.5	1.11	10
Chesterville.....	42.64	33-66	50	3	1.5	0.83	10
Chippawa.....	23.77	33-66	60	2.5	1.25	1.11	10
Clifford.....	61.38	33-66	50	4.5	2	1.66	10
Clinton.....	36.10	33-66	60	2.5	1.5	1.11	10
Coldwater.....	38.15	33-66	55	2.5	1.25	1.11	10
Collingwood.....	40.30	33-66	55	2.5	1	0.83	10
Comber.....	48.99	33-66	50	4	2	1.38	10
Cookstown.....	55.72	33-66	35	7	2	1.67	10
Cottam.....	40.04	33-66	50	4	2	1.66	10
Courtright.....	64.47	33-66	50	6	2	2.22	10
Creemore.....	55.53	33-66	55	3	1.5	0.83	10
Dashwood.....	49.13	33-66	45	5	2	1.38	10
Delaware.....	36.69	33-66	50	4	2	1.11	10
Deseronto.....	48.78	33-33	60	6.5	2	1.11	10
Dorchester.....	35.93	33-66	55	3	1.5	0.83	10
Drayton.....	61.08	33-66	55	3.5	1.5	1.11	10
Dresden.....	42.35	33-66	60	2.5	1.25	1.11	10
Drumbo.....	40.96	33-66	50	4	1.5	1.11	10
Dublin.....	54.58	33-66	50	6	2	1.67	10
Dundalk.....	41.04	33-66	55	3	1.5	1.11	10
Dundas.....	24.88	33-66	60	2	1	0.83	10
Dunnville.....	31.99	33-66	60	2.5	1.5	0.83	10
Durham.....	40.96	33-66	50	2.5	1.25	0.83	10
Dutton.....	35.65	33-66	60	2.4	1.2	0.83	10
East Windsor.....	30.24	33-66	60	2.5	1	0.83	10
East York twp.....	30.29	33-66	60	2.2	1.2	0.83	10
Elmira.....	32.19	33-66	60	2.5	1.25	0.83	10
Elmvale.....	42.43	33-66	55	3	1.5	0.83	10
Elmwood.....	52.56	33-66	45	5	2	1.39	10
Elora.....	34.15	33-66	55	3	1.5	1.11	10
Embro.....	42.17	33-66	50	4	2	1.67	10
Erieau.....	55.60	33-66	45	5	2	1.67	10
Erie Beach.....	64.19	33-66	50	7	2	1.94	10

NOTE.—Domestic Service Charge—33 cents per month per service when the permanently installed appliance load is under 2,000 watts and 66 cents per month when over 2,000 watts.

“E”—Continued

Domestic Service—Commercial Light Service—Power Service  
Served by the Hydro-Electric Power Commission

Commercial light service					Power service							
Service charge per 100 watts min. 1000 watts	First 100 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount	Basis of rate 130 hours monthly use of demand	Service charge per h.p. per month	First 50 hr. per month per kw-hr.	Second 50 hr. per month per kw-hr.	All additional per kw-hr.	Minimum or maximum per h.p. per month	Local discount	Prompt payment discount
cents	cents	cents	\$ c.	%	\$ c.	\$ c.	cents	cents	cents	\$ c.	%	%
5	3	1	1.11	10	35.00	1.00	3.5	2.3	0.33	.....	.....	10
5	3.5	1	1.94	10	40.00	1.00	4.3	2.8	0.33	min. 3.33	.....	10
5	4	1	0.83	10	27.00	1.00	2.3	1.5	0.33	.....	.....	10
5	5	1	1.66	10	50.00	1.00	5.7	3.8	0.33	.....	.....	10
5	2.5	0.8	0.83	10	23.00	1.00	2.1	1.4	0.33	.....	10	10
5	5.5	1	1.67	10	45.00	1.00	4.9	3.3	0.33	.....	.....	10
5	3	1	1.11	10	32.00	1.00	3.1	2	0.33	.....	.....	10
5	3	1	0.83	10	30.00	1.00	2.8	1.8	0.33	.....	.....	10
5	2.5	0.75	1.11	10	25.00	1.00	2	1.3	0.33	.....	.....	10
5	4.5	1	1.66	10	50.00	1.00	5.7	3.8	0.33	.....	.....	10
5	2.5	1	1.11	10	33.00	1.00	3.2	2.1	0.33	.....	.....	10
5	2.5	1	1.11	10	30.00	1.00	2.8	1.8	0.33	.....	.....	10
5	2.5	1	0.83	10	20.00	1.00	1.6	1	0.33	.....	10	10
5	4	1	1.38	10	36.00	1.00	3.7	2.4	0.33	.....	.....	10
5	7	1	1.67	10	43.00	1.00	4.7	3.1	0.33	.....	.....	10
5	4	1	1.66	10	43.00	1.00	4.7	3.1	0.33	min. 2.22	.....	10
7.5	6	1	2.22	10	55.00	1.00	6.5	4.3	0.33	.....	.....	10
5	3	1	0.83	10	50.00	1.00	5.7	3.8	0.33	.....	.....	10
5	5	1	1.38	10	50.00	1.00	5.7	3.8	0.33	min. 2.77	.....	10
5	4	1	1.11	10	35.00	1.00	3.5	2.3	0.33	.....	.....	10
5	6.5	2	1.11	10	30.00	1.00	2.8	1.8	0.33	.....	.....	10
5	3	1	0.83	10	34.00	1.00	3.4	2.2	0.33	.....	.....	10
5	3.5	0.75	1.11	10	40.00	1.00	4.3	2.8	0.33	.....	.....	10
5	2.5	0.75	1.11	10	33.00	1.00	3.2	2.1	0.33	.....	.....	10
5	4	1	1.11	10	44.00	1.00	4.8	3.2	0.33	.....	.....	10
5	6	1	1.67	10	45.00	1.00	4.9	3.3	0.33	.....	.....	10
5	3	1	1.11	10	30.00	1.00	2.8	1.8	0.33	.....	.....	10
5	2	0.6	0.83	10	19.00	1.00	2	1.4	0.33	.....	25	10
5	2.5	0.75	0.83	10	23.00	1.00	2.1	1.4	0.33	.....	10	10
5	2.5	1	0.83	10	24.00	1.00	2.3	1.5	0.33	.....	10	10
5	2.4	0.75	0.83	10	24.00	1.00	2.3	1.5	0.33	.....	10	10
5	2.5	0.8	0.83	10	23.00	1.00	2.1	1.4	0.33	.....	10	10
5	2.2	0.6	0.83	10	21.00	1.00	1.8	1.1	0.33	.....	10	10
5	2.5	0.75	0.83	10	22.00	1.00	1.9	1.3	0.33	.....	10	10
5	3	1	0.83	10	30.00	1.00	2.8	1.8	0.33	.....	.....	10
5	5	1	1.39	10	45.00	1.00	4.9	3.3	0.33	.....	.....	10
5	3	0.75	1.11	10	26.00	1.00	2.2	1.4	0.33	.....	.....	10
5	4	1	1.67	10	42.00	1.00	4.6	3	0.33	min. 2.22	.....	10
5	5	1	1.67	10	50.00	1.00	5.7	3.8	0.33	min. 2.22	.....	10
5	7	1	1.94	10	60.00	1.00	7.2	4.8	0.33	.....	.....	10



## STATEMENT

**Cost of Power to Municipalities and Rates to Consumers for  
for the Year 1931, in Urban Municipalities**

Municipality	Annual cost to the Commission on the works to serve electrical energy to municipality on a horse power basis	Domestic service					
		Service charge per month	First rate		All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount
			Number of kw-hr. per month	Per kw-hr. per month			
	\$ c.	cents		cents	cents	\$ c.	%
Essex.....	32.67	33-66	55	3	1.25	0.83	10
Etobicoke twp.....	26.90	33-66	60	2.2	1.2	0.83	10
Exeter.....	36.00	33-66	55	3	1.5	0.83	10
Fergus.....	34.54	33-66	55	3	1.5	1.11	10
Finch.....	65 11	33-66	40	6	2	1.94	10
Flesherton.....	44.51	33-66	55	3.5	1.5	1.11	10
Fonthill.....	33.27	33-66	55	3	1.5	1.38	10
Forest.....	44.86	33-66	55	3.5	1.5	1.11	10
Fort William.....	23.60	33-66	50	2.5	1	0.83	10
Galt.....	25.87	33-66	60	2.5	1.25	0.83	10
Gamebridge.....	.....	33-66	45	5	2	1.67	10
Georgetown.....	34.83	33-66	60	2	1	0.83	10
Glencoe.....	56.38	33.66	55	3.5	2	1.11	10
Glen Williams.....	.....	33-66	60	3	1.5	0.83	10
Goderich.....	40.27	33-66	55	3	1.5	0.83	10
Grand Valley.....	58.42	33-66	45	5	2	1.39	10
Granton.....	48.27	33-66	55	3	1.5	1.11	10
Gravenhurst.....	23.06	33-66	60	2	1	0.83	10
Guelph.....	26.20	33-33	60	2	1	0.83	10
Hagersville.....	29.49	33-66	60	2.	1	0.83	10
Hamilton.....	23.68	33-66	60	2	1	0.83	10
Hanover.....	34.57	33-66	55	3	1.5	0.83	10
Harriston.....	44.93	33-66	55	3.5	1.5	1.11	10
Harrow.....	37.50	33-66	55	3	1.5	0.83	10
Hastings.....	69.28	33-66	60	6	2	2.78	10
Havelock.....	44.75	33-66	50	5	2	0.83	10
Hensall.....	47.22	33-66	55	3.5	1.5	1.11	10
Hespeler.....	26.88	33-66	60	2.5	1.25	0.83	10
Highgate.....	45.20	33-66	50	4	2	1.11	10
Holstein.....	115.28	33-66	60	9	5	1.67	10
Hornings Mills.....	.....	33-66	30	8	2	1.67	10
Humberstone.....	27.74	33-66	60	2.5	1.25	0.83	10
Huntsville.....	26.17	33-66	55	2.5	1.25	0.83	10
Ingersoll.....	27.08	33-66	60	2	1.2	0.83	10
Jarvis.....	35.89	33-66	50	4	2	1.11	10
Kemptville.....	40.41	33-66	50	3.5	2	0.83	10
Kincardine.....	54.84	33-66	40	4	2	1.11	10
Kingston.....	24.00-36.00	33-66	50	2	1	0.83	10
Kingsville.....	36.44	33-66	55	3	1.25	0.83	10
Kirkfield.....	57.51	33-66	40	6	2	2.22	10

NOTE.—Domestic Service Charge—33 cents per month per service when the permanently installed appliance load is under 2,000 watts and 66 cents per month when over 2,000 watts.

## "E"—Continued

Domestic Service—Commercial Light Service—Power Service  
Served by the Hydro-Electric Power Commission

Commercial light service					Power service							
Service charge per 100 watts min. 1000 watts	First 100 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount	Basis of rate 130 hours monthly use of demand	Service charge per h.p. per month	First 50 hr. per month per kw-hr.	Second 50 hr. per month per kw-hr.	All additional per kw-hr.	Minimum or maximum per h.p. per month	Local discount	Prompt payment discount
cents	cents	cents	\$ c.	%	\$ c.	\$ c.	cents	cents	cents	\$ c.	%	%
5	3	0.75	0.83	10	30.00	1.00	2.8	1.8	0.33	.....	.....	10
5	2.2	0.6	0.83	10	21.00	1.00	1.8	1.1	0.33	.....	10	10
5	3	0.75	0.83	10	30.00	1.00	2.8	1.8	0.33	.....	.....	10
5	3	1.5	1.11	10	31.00	1.00	2.9	1.9	0.33	.....	.....	10
5	6	1	2.50	10	50.00	1.00	5.7	3.8	0.33	.....	.....	10
5	3.5	1	1.11	10	40.00	1.00	4.3	2.8	0.33	.....	.....	10
5	3	0.75	1.38	10	30.00	1.00	2.8	1.8	0.33	.....	.....	10
5	3.5	0.75	1.11	10	42.00	1.00	4.6	3	0.33	.....	.....	10
5	2.5	1	0.83	10	22.00	1.00	1.75	1	0.1	.....	.....	10
5	2.5	0.6	0.83	10	20.00	1.00	1.6	1	0.33	.....	10	10
5	5	1	1.67	10	45.00	1.00	4.9	3.3	0.33	.....	.....	10
5	2	0.5	0.83	10	21.00	1.00	1.8	1.1	0.33	.....	10	10
5	3.5	1	1.11	10	48.00	1.00	5.4	3.6	0.33	.....	.....	10
5	3	0.75	0.83	10	36.00	1.00	3.7	2.4	0.33	.....	.....	10
5	3	0.75	0.83	10	33.00	1.00	3.2	2.1	0.33	.....	.....	10
5	5	1	1.39	10	45.00	1.00	4.9	3.3	0.33	.....	.....	10
5	3	1	1.11	10	33.00	1.00	3.2	2.1	0.33	.....	.....	10
5	2	1	0.83	10	18.00	1.00	1.9	1.2	0.33	.....	25	10
5	2	0.5	0.83	10	15.00	1.00	1.3	0.8	0.33	.....	25	10
5	2	0.75	0.83	10	22.00	1.00	1.9	1.3	0.33	.....	10	10
.....	*3.5	0.35	0.83	10	20.00	1.00	1.67	1.11	0.133	.....	10	10
	**1.75											
5	3	1	0.83	10	26.00	1.00	2.2	1.4	0.33	.....	.....	10
5	3.5	1	1.11	10	32.00	1.00	3.1	2	0.33	.....	.....	10
5	3	1	0.83	10	36.00	1.00	3.7	2.4	0.33	.....	.....	10
5	6	2	2.78	10	51.00	1.00	5.9	3.9	0.33	.....	.....	10
5	5	1	0.83	10	35.00	1.00	3.5	2.3	0.33	.....	.....	10
5	3.5	1	1.11	10	35.00	1.00	3.5	2.3	0.33	min. 2.22	.....	10
5	2.5	0.75	0.83	10	19.00	1.00	2	1.4	0.33	.....	25	10
5	4	1	1.11	10	38.00	1.00	4	2.6	0.33	.....	.....	10
5	9	5	1.67	10	74.00	1.00	9.3	6.2	0.33	.....	.....	10
5	8	1	1.67	10	50.00	1.00	5.7	3.8	0.33	.....	.....	10
5	2.5	0.75	0.83	10	29.00	1.00	2.6	1.7	0.33	.....	.....	10
5	2.5	1	0.83	10	25.00	1.00	2	1.3	0.33	.....	.....	10
5	2	0.6	0.83	10	20.00	1.00	1.6	1	0.33	.....	10	10
5	4	0.75	1.11	10	32.00	1.00	3.1	2	0.33	.....	.....	10
5	3.5	1	0.83	10	35.00	1.00	3.5	2.3	0.33	.....	.....	10
5	4	1	1.11	10	32.00	1.00	3.1	2	0.33	.....	.....	10
5	2	0.75	0.83	10	20.00	1.00	1.5	1.0	0.33	.....	10	10
5	3	0.75	0.83	10	35.00	1.00	3.5	2.3	0.33	.....	.....	10
5	6	1	2.22	10	45.00	1.00	4.9	3.3	0.33	.....	.....	10

\*First 30 hours per kw-hr.

\*\*Next 70 hours per kw-hr.

## STATEMENT

**Cost of Power to Municipalities and Rates to Consumers for  
for the Year 1931, in Urban Municipalities**

Municipality	Annual cost to the Commission on the works to serve electrical energy to municipality on a horse power basis	Domestic service					
		Service charge per month	First rate		All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount
			Number of kw-hr. per month	Per kw-hr. per month			
	\$ c.	cents		cents	cents	\$ c.	%
Kitchener.....	25.21	33-66	60	2	1.2	0.83	10
Lakefield.....	40.07	33-66	50	3	2	0.83	10
Lambeth.....	38.36	33-66	50	4	2	1.38	10
Lanark.....	46.44	33-66	50	4	2	0.83	10
Lancaster.....	74.60	33-66	60	6	2	1.94	10
LaSalle.....	33.37	33-66	50	4	2	1.11	10
Leamington.....	37.15	33-66	55	2.6	1.25	0.83	10
Leaside.....		* 3		** 2	1.5	0.83	10
Lindsay.....	39.63	33-66	40	3	1.5	0.83	10
Listowel.....	35.62	33-66	60	2.5	1.25	1.11	10
London.....	24.88	33-66	60	2	1	0.83	10
London twp.....	31.21	33-66	55	3	1.5	1.11	10
Long Branch.....	27.85	33-66	60	2.2	1.2	0.83	10
Lucan.....	34.14	33-66	55	3.5	1.5	1.11	10
Lucknow.....	59.63	33-66	45	4.5	2	1.67	10
Lynden.....	37.83	33-66	55	3.5	1.5	1.38	10
Madoc.....	46.85	33-66	50	4	2	0.83	10
Markdale.....	38.88	33-66	55	3	1.5	1.11	10
Markham.....	39.08	33-66	55	3.5	1.5	1.11	10
Marmora.....	46.75	33-66	60	5	2	1.11	10
Martintown.....	52.25	33-66	60	6	2	1.66	10
Maxville.....	60.58	33-66	60	6	2	1.66	10
Meaford.....	45.78	33-66	55	3	1.5	0.83	10
Merlin.....	44.34	33-66	50	4.5	2	1.11	10
Merritton.....	22.19	33-66	60	2	1	0.83	10
Midland.....	34.72	33-66	60	2	1	0.83	10
Milton.....	33.27	33-66	55	3	1.5	0.83	10
Milverton.....	33.08	33-66	60	2.5	1.25	1.11	10
Mimico.....	24.86	33-66	60	2.2	1.2	0.83	10
Mitchell.....	31.24	33-33	60	2.5	1.5	0.83	10
Moorefield.....	66.33	33-66	50	4	2	1.11	10
Mount Brydges.....	37.19	33-66	55	3	1.5	1.11	10
Mount Forest.....	47.69	33-66	60	2.25	1.25	0.83	10
Napanee.....	34.71	33-33	60	4.5	2	0.83	10
Neustadt.....	93.20	33-66	60	8	2	1.67	10
Newbury.....	51.97	33-66	45	5	2	1.38	10
New Hamburg.....	33.53	33-66	60	2.5	1.5	0.83	10
New Toronto.....	27.93	33-66	60	2	1.1	0.83	10
Niagara Falls.....	19.96	33-66	60	2	1	0.83	10 & 10
Niagara-on-the-Lake.....	25.97	33-66	60	2.5	1.25	0.83	10
						to 1.11	10

NOTE.—Domestic Service Charge—33 cents per month per service when the permanently installed appliance load is under 2,000 watts and 66 cents per month when over 2,000 watts.

\*Service charge per 100 sq. ft.

\*\*Per kw-hr. for first 3 kw-hr. per 100 sq. ft.



“E”—Continued

Domestic Service—Commercial Light Service—Power Service  
Served by the Hydro-Electric Power Commission

Commercial light service					Power service							
Service charge per 100 watts min. 1000 watts	First 100 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount	Basis of rate 130 hours monthly use of demand	Service charge per h.p. per month	First 50 hr. per month per kw-hr.	Second 50 hr. per month per kw-hr.	All additional per kw-hr.	Minimum or maximum per h.p. per month	Local discount	Prompt payment discount
cents	cents	cents	\$ c.	%	\$ c.	\$ c.	cents	cents	cents	\$ c.	%	%
5	2	0.75	0.83	10	19.00	1.00	2	1.4	0.33	.....	25	10
5	3	1	0.83	10	24.00	1.00	2.3	1.5	0.33	.....	10	10
5	4	1	1.38	10	38.00	1.00	4	2.6	0.33	.....	.....	10
5	4	1	1.11	10	60.00	1.00	7.2	4.8	0.33	.....	.....	10
5	6	1	2.78	10	69.00	1.00	8.6	5.7	0.33	.....	.....	10
5	4	1	1.11	10	35.00	1.00	3.5	2.3	0.33	.....	.....	10
5	2.6	0.75	0.83	10	30.00	1.00	2.8	1.8	0.33	.....	.....	10
..... R 4 & 2	1	0.83	0.83	10	23.28	1.00	1.8	1.1	0.33	.....	.....	10
5	3	1	0.83	10	20.00	1.00	1.6	1	0.33	.....	10	10
5	2.5	0.75	1.11	10	26.00	1.00	2.2	1.4	0.33	.....	.....	10
5	2	0.5	0.83	10	18.00	1.00	1.9	1.2	0.33	.....	25	10
5	3	0.75	1.11	10	30.00	1.00	2.8	1.8	0.33	.....	.....	10
5	2.2	0.60	0.83	10	21.00	1.00	1.8	1.1	0.33	.....	10	10
5	3.5	0.75	1.11	10	30.00	1.00	2.8	1.8	0.33	.....	.....	10
5	4.5	1	1.67	10	43.00	1.00	4.7	3.1	0.33	.....	.....	10
5	3.5	1.5	0.83	10	32.00	1.00	3.1	2.0	0.33	.....	.....	10
5	4	1	0.83	10	35.00	1.00	3.5	2.3	0.33	.....	.....	10
5	3	1	1.11	10	30.00	1.00	2.8	1.8	0.33	.....	.....	10
5	3.5	1	1.11	10	38.00	1.00	4	2.6	0.33	.....	.....	10
5	5	1	1.11	10	40.00	1.00	4.3	2.8	0.33	.....	.....	10
5	6	1	2.22	10	55.00	1.00	6.5	4.3	0.33	.....	.....	10
5	6	1	2.22	10	55.00	1.00	6.5	4.3	0.33	.....	.....	10
5	3	1	0.83	10	30.00	1.00	2.8	1.8	0.33	.....	.....	10
5	4.5	1	1.11	10	37.00	1.00	3.8	2.5	0.33	min. 2.22 max. 2.67	.....	10
5	2	0.75	0.83	10	20.00	1.00	1.6	1	0.33	min. 2.06	10	10
5	2	1	0.83	10	17.00	1.00	1.7	1.1	0.33	.....	25	10
5	3	0.75	0.83	10	24.00	1.00	2.3	1.5	0.33	.....	10	10
5	2.5	0.75	1.11	10	26.00	1.00	2.2	1.4	0.33	.....	.....	10
5	2.2	0.60	0.83	10	22.00	1.00	1.9	1.3	0.33	.....	10	10
5	2.5	0.75	0.83	10	26.00	1.00	2.2	1.4	0.33	.....	.....	10
5	4	1	1.11	10	50.00	1.00	5.7	3.8	0.33	.....	.....	10
5	3	0.75	1.11	10	36.00	1.00	3.7	2.4	0.33	.....	.....	10
5	2.25	1	0.83	10	30.00	1.00	2.8	1.8	0.33	.....	.....	10
5	4.5	1	0.83	10	25.00	1.00	2	1.3	0.33	.....	.....	10
5	8	1	1.67	10	40.00	1.00	4.3	2.8	0.33	.....	.....	10
5	5	1	1.38	10	53.00	1.00	6.2	4.1	0.33	.....	.....	10
5	2.5	0.75	0.83	10	28.00	1.00	2.5	1.6	0.33	.....	.....	10
5	2	0.6	0.83	10	20.00	1.00	1.6	1	0.33	.....	10	10
5	2	0.35	0.83	10	15.00	1.00	1.3	0.8	0.33	.....	25	10
5	2.5	0.75	0.83	10	28.00	1.00	2.5	1.6	0.33	min. 2.00	.....	10

R First 70 hours per kw-hr.  
Next 70 hours per kw-hr.

# STATEMENT

## Cost of Power to Municipalities and Rates to Consumers for for the Year 1931, in Urban Municipalities

Municipality	Annual cost to the Commission on the works to serve electrical energy to municipality on a horse power basis	Domestic service					
		Service charge per month	First rate		All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount
			Number of kw-hr. per month	Per kw-hr. per month			
	\$ c.	cents		cents	cents	\$ c.	%
Nipigon twp.....	26.72	33-66	55	3.5	1.25	1.39	10
North York twp.....	30.39	33-66	55	3	1.5	1.11	10
Norwich.....	33.19	33-66	60	2.5	1.25	0.83	10
Norwood.....	38.35	33-66	50	5	2	1.11	10
Oil Springs.....	44.15	33-66	50	4	2	1.11	10
Omeme.....	.....	33-66	60	4	2	1.11	10
Orangeville.....	45.15	33-66	60	2.5	1.25	1.11	10
Oshawa.....	36.17	33-66	40	3.5	1.5	0.83	10
Ottawa.....	13.37	33-66	60	2	0.5	0.83	10
			60	1			
Otterville.....	39.62	33-66	55	3	1.5	1.11	10
Owen Sound.....	35.10	33-66	60	2	1	0.83	10
Paisley.....	51.09	33-66	45	5	2	1.67	10
Palmerston.....	39.60	33-66	60	2.5	1.25	1.11	10
Paris.....	26.71	33-66	60	2	1.25	0.83	10
Parkhill.....	57.95	33-66	50	4.5	2	1.38	10
Penetang.....	39.91	33-66	60	2	1	0.83	10
Perth.....	29.44	33-66	55	3	1.5	0.83	10
Peterboro.....	29.26	33-66	50	2.5	1.25	0.83	10
Petrolia.....	38.71	33-66	60	2.5	1.25	0.83	10
Picton.....	47.36	33-66	60	2.5	1.25	0.83	10
Plattsville.....	52.92	33-66	45	5	2	1.66	10
Point Edward.....	35.62	33-66	55	3	1.5	0.83	10
Port Arthur.....	23.11	33-66	30	2	1	0.83	10 & 10
Port Colborne.....	27.86	33-66	60	2.5	1.25	0.83	10
Port Credit.....	31.46	33-66	60	2.2	1.2	0.83	10
Port Dalhousie.....	28.56	33-66	60	2.2	1.2	0.83	10
Port Dover.....	39.02	33-66	50	3	1.5	1.11	10
Port Elgin.....	43.11	33-66	40	4	2	1.39	10
Port Hope.....	36.41	33-66	60	3.5	2	0.83	10
Port McNicoll.....	38.10	33-66	50	3.5	1.5	0.83	10
Port Perry.....	50.15	33-66	50	3.5	1.5	1.11	10
Port Rowan.....	61.56	33-66	60	6	2	1.66	10
Port Stanley.....	38.34	33-66	55	3	1.5	0.83	10
Prescott.....	28.97	33-66	60	2	1	0.83	10
Preston.....	25.53	33-66	60	2.5	1.25	0.83	10
Priceville.....	77.75	33-66	60	8	2	1.67	10
Princeton.....	45.44	33-66	50	3.5	2	1.66	10
Queenston.....	27.00	33-66	65	3	1.5	1.38	10
Richmond.....	49.11	33-66	35	6	2	1.95	10
Richmond Hill.....	33.76	33-66	60	2.5	1.25	0.83	10

NOTE.—Domestic service charge—33 cents per month per service when the permanently installed appliance load is under 2,000 watts and 66 cents per month when over 2,000 watts.

“E”—Continued

Domestic Service—Commercial Light Service—Power Service  
Served by the Hydro-Electric Power Commission

Commercial light service					Power service							
Service charge per 100 watts min. 1000 watts	First 100 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount	Basis of rate 130 hours monthly use of demand	Service charge per h.p. per month	First 50 hr. per month per kw-hr.	Second 50 hr. per month per kw-hr.	All additional per kw-hr.	Minimum or maximum per h.p. per month	Local discount	Prompt payment discount
cents	cents	cents	\$ c.	%	\$ c.	\$ c.	cents	cents	cents	\$ c.	%	%
5	3.5	1	1.39	10	40.00	1.00	4.3	2.8	0.33	.....	.....	10
5	3	0.75	1.11	10	30.00	1.00	2.8	1.8	0.33	.....	.....	10
5	2.5	0.75	0.83	10	28.00	1.00	2.5	1.6	0.33	.....	.....	10
5	5	1	1.11	10	38.00	1.00	4	2.6	0.33	.....	.....	10
5	4	1	1.11	10	34.00	1.00	3.4	2.2	0.33	.....	.....	10
5	4	1	1.11	10	37.00	1.00	3.8	2.5	0.33	.....	.....	10
5	2.5	1.25	1.11	10	30.00	1.00	2.8	1.8	0.33	.....	.....	10
5	3.5	1	0.83	10	22.00	1.00	1.9	1.3	0.33	.....	10	10
.....	*5	0.5	0.83	10	20.00	1.00	1.8	1.2	0.15	.....	15	10
	**2.2											
5	3	1	1.11	10	36.00	1.00	3.7	2.4	0.33	.....	.....	10
5	2	1	0.83	10	18.00	1.00	1.9	1.2	0.33	.....	25	10
5	5	1	1.67	10	55.00	1.00	6.5	4.3	0.33	.....	.....	10
5	2.5	1	1.11	10	26.00	1.00	2.2	1.4	0.33	.....	.....	10
5	2	0.75	0.83	10	18.00	1.00	1.9	1.2	0.33	.....	25	10
5	4.5	1	1.38	10	48.00	1.00	5.4	3.6	0.33	.....	.....	10
5	2	1	0.83	10	23.00	1.00	2.1	1.4	0.33	.....	10	10
5	3	1	0.83	10	23.00	1.00	2.1	1.4	0.33	.....	10	10
5	2.5	1	0.83	10	18.00	1.00	1.9	1.2	0.33	.....	25	10
5	2.5	0.75	0.83	10	29.00	1.00	2.6	1.7	0.33	.....	.....	10
5	2.5	1	0.83	10	25.00	1.00	2	1.3	0.33	.....	.....	10
5	5	1	1.66	10	48.00	1.00	5.4	3.6	0.33	min. 2.00	.....	10
5	3	0.75	0.83	10	27.00	1.00	2.3	1.5	0.33	.....	.....	10
5	2	0.5	0.83	10 & 10	22.00	1.00	1.75	1	0.1	.....	.....	10
5	2.5	0.75	0.83	10	28.00	1.00	2.5	1.6	0.33	.....	.....	10
5	2.2	0.75	0.83	10	25.00	1.00	2	1.3	0.33	.....	.....	10
5	2.2	0.75	0.83	10	20.00	1.00	1.6	1	0.33	.....	10	10
5	3	1	1.11	10	32.00	1.00	3.1	2	0.33	.....	.....	10
5	4	1	1.39	10	35.00	1.00	3.5	2.3	0.33	.....	.....	10
5	3.5	1	0.83	10	24.00	1.00	2.3	1.5	0.33	.....	10	10
5	3.5	1	0.83	10	35.00	1.00	3.5	2.3	0.33	.....	.....	10
5	3.5	1	1.11	10	35.00	1.00	3.5	2.3	0.33	.....	.....	10
5	6	2	1.66	10	60.00	1.00	7.2	4.8	0.33	.....	.....	10
5	3	0.75	0.83	10	37.00	1.00	3.8	2.5	0.33	min. 1.11	.....	10
5	2	1	0.83	10	22.00	1.00	1.9	1.3	0.33	.....	10	10
5	2.5	0.75	0.83	10	19.00	1.00	2	1.4	0.33	.....	25	10
5	8	1	1.67	10	50.00	1.00	5.7	3.8	0.33	.....	.....	10
5	3.5	1	1.66	10	42.00	1.00	4.6	3	0.33	.....	.....	10
5	3	1	1.38	10	30.00	1.00	2.8	1.8	0.33	.....	.....	10
5	6	1	2.22	10	60.00	1.00	7.2	4.8	0.33	.....	.....	10
5	2.5	0.75	0.83	10	25.00	1.00	2	1.3	0.33	.....	.....	10

\*First 30 hours per kw-hr.

\*\*Next 70 hours per kw-hr.



## STATEMENT

**Cost of Power to Municipalities and Rates to Consumers for  
for the Year 1931, in Urban Municipalities**

Municipality	Annual cost to the Commission on the works to serve electrical energy to municipal- ity on a horse power basis	Domestic service					
		Service charge per month	First rate		All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount
			Number of kw-hr. per month	Per kw-hr. per month			
	\$ c.	cents		cents	cents	\$ c.	%
Ridgetown.....	37.48	33-66	60	2.4	1.25	0.83	10
Ripley.....	77.01	33-66	50	7	2	1.67	10
Riverside.....	31.95	33-66	55	3	1.25	0.83	10
Rockwood.....	38.96	33-66	60	2.5	1.25	1.11	10
Rodney.....	44.62	33-66	55	3	1.5	0.83	10
Rosseau.....	151.88	33-66 ‡	8	2	2.22 ‡	10	
Russell.....	60.41	33-66	50	6	2	1.66	10
St. Catharines.....	22.14	33-66	30 & 60	2	1	0.83	10
St. Clair Beach.....	35.73	33-66	55	3.5	1.5	1.66	10
St. George.....	38.74	33-66	60	2	1	0.83	10
St. Jacobs.....	31.27	33-66	60	2.5	1.25	1.11	10
St. Marys.....	31.48	33-66	60	2.5	1.5	1.11	10
St. Thomas.....	26.50	33-66	60	2	1	0.83	10
Sandwich.....	30.77	33-66	60	2.5	1	0.83	10
Sarnia.....	31.15	33-66	60	2.4	1.1	0.83	10
Scarboro twp.....	29.13	33-33	60	2.6	1.3	0.83	10
Seaforth.....	33.35	33-66	60	2.5	1.25	0.83	10
Shelburne.....	45.45	33-66	50	3	1.5	1.11	10
Simcoe.....	28.87	33-66	60	2	1.25	0.83	10
Smiths Falls.....	27.09	33-66	55	3	1.5	0.83	10
Southampton.....	38.78	33-66	40	4	2	1.39	10
Springfield.....	47.29	33-66	55	3.5	1.5	1.11	10
Stamford twp.....	20.49	33-66	60	2	1.2	0.83	10
Stayner.....	41.70	33-66	55	2.5	1.25	0.83	10
Stirling.....	30.06	33-66	45	2.5	1.25	0.83	10
Stouffville.....	43.62	33-66	55	3.5	1.5	1.11	10
Stratford.....	27.05	33-66	60	2.1	1.25	0.83	10
Strathroy.....	31.10	33-66	60	2.5	1.25	0.83	10
Sunderland.....	60.32	33-66	45	5	2	1.39	10
Sutton.....	56.52	33-66	50	4.5	2	1.11	10
Tara.....	48.41	33-66	35	5	2	1.39	10
Tavistock.....	33.39	33-66	60	2.5	1.25	0.83	10
Tecumseh.....	34.84	33-66	55	3.5	1.5	1.11	10
Teeswater.....	58.36	33-66	60	5	2	1.67	10
Thamesford.....	37.80	33-66	60	2.5	1.5	1.11	10
Thamesville.....	37.48	33-66	55	3	1.25	0.83	10
Thedford.....	69.42	33-66	50	5	2	1.38	10
Thorndale.....	67.63	33-66	50	4	2	1.38	10
Thornton.....	78.28	33-66	60	8	2	1.67	10
Thorold.....	24.40	33-66	60	2	1	0.83	10

NOTE.—Domestic service charge—33 cents per month per service when the permanently installed appliance load is under 2,000 watts and 66 cents per month when over 2,000 watts.

‡According to consumers' demand.

## "E"—Continued

Domestic Service—Commercial Light Service—Power Service  
Served by the Hydro-Electric Power Commission

Commercial light service					Power service							
Service charge per 100 watts min. 1000 watts	First 100 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount	Basis of rate 130 hours monthly use of demand	Service charge per h.p. per month	First 50 hr. per month per kw-hr.	Second 50 hr. per month per kw-hr.	All additional per kw-hr.	Minimum or maximum per h.p. per month	Local discount	Prompt payment discount
cents	cents	cents	\$ c.	%	\$ c.	\$ c.	cents	cents	cents	\$ c.	%	%
5	2.4	0.75	0.83	10	23.00	1.00	2.1	1.4	0.33	.....	10	10
5	7	1	1.67	10	50.00	1.00	5.7	3.8	0.33	.....	10	10
5	3	0.8	0.83	10	28.00	1.00	2.5	1.6	0.33	.....	10	10
5	2.5	0.75	1.11	10	42.00	1.00	4.6	3	0.33	.....	10	10
5	3	0.75	0.83	10	35.00	1.00	3.5	2.3	0.33	.....	10	10
5	8	2	2.22	10	58.00	1.00	6.9	4.6	0.33	.....	10	10
5	6	1	2.22	10	56.00	1.00	6.6	4.4	0.33	.....	10	10
.....	*3.5	0.35	0.83	10	17.00	1.00	1.67	1.13	0.16	.....	25	10
	**1.75											
5	3.5	1	1.66	10	40.00	1.00	4.3	2.8	0.33	.....	10	10
5	2	0.75	0.83	10	32.00	1.00	3.1	2	0.33	.....	10	10
5	2.5	0.75	1.11	10	24.00	1.00	2.3	1.5	0.33	.....	10	10
5	2.5	0.75	1.11	10	26.00	1.00	2.2	1.4	0.33	.....	10	10
5	2	0.5	0.83	10	17.00	1.00	1.7	1.1	0.33	.....	25	10
5	2.5	0.8	0.83	10	23.00	1.00	2.1	1.4	0.33	.....	10	10
5	2.4	0.6	0.83	10	24.00	1.00	2.3	1.5	0.33	.....	10	10
5	2.4	0.6	0.83	10	23.00	1.00	2.1	1.4	0.33	.....	10	10
5	2.5	0.75	0.83	10	29.00	1.00	2.6	1.7	0.33	.....	10	10
5	3	1	1.11	10	30.00	1.00	2.8	1.8	0.33	.....	10	10
5	2	0.75	0.83	10	25.00	1.00	2	1.3	0.33	.....	10	10
5	3	1	0.83	10	26.00	1.00	2.2	1.4	0.33	.....	10	10
5	4	1	1.39	10	35.00	1.00	3.5	2.3	0.33	.....	10	10
5	3.5	1	1.11	10	42.00	1.00	4.6	3	0.33	min. 2.22	.....	10
5	2.25	0.5	0.83	10	18.00	1.00	1.9	1.2	0.33	.....	25	10
5	2.5	1	0.83	10	28.00	1.00	2.5	1.6	0.33	.....	10	10
5	2.5	1	0.83	10	32.00	1.00	3.1	2	0.33	.....	10	10
5	3.5	1	1.11	10	43.00	1.00	4.7	3.1	0.33	.....	10	10
5	2.1	0.75	0.83	10	24.00	1.00	2.3	1.5	0.33	.....	10	10
5	2.5	0.75	0.83	10	27.00	1.00	2.3	1.5	0.33	.....	10	10
5	5	1	1.39	10	40.00	1.00	4.3	2.8	0.33	.....	10	10
5	4.5	1	1.11	10	50.00	1.00	5.7	3.8	0.33	.....	10	10
5	5	1	1.39	10	50.00	1.00	5.7	3.8	0.33	.....	10	10
5	2.5	0.75	0.83	10	25.00	1.00	2	1.3	0.33	.....	10	10
5	3.5	0.8	1.11	10	32.00	1.00	3.1	2	0.33	.....	10	10
5	5	1	1.67	10	40.00	1.00	4.3	2.8	0.33	.....	10	10
5	2.5	0.75	1.11	10	31.00	1.00	2.9	1.9	0.33	.....	10	10
5	3	0.75	0.83	10	32.00	1.00	3.1	2	0.33	.....	10	10
5	5	1	1.38	10	55.00	1.00	6.5	4.3	0.33	.....	10	10
5	4	1	1.38	10	48.00	1.00	5.4	3.6	0.33	min. 3.33	.....	10
5	8	1	1.67	10	58.00	1.00	6.9	4.6	0.33	.....	10	10
5	2	0.5	0.83	10	18.00	1.00	1.9	1.3	†0.33 0.295	.....	25	10

\*First 30 hours per kw-hr.

\*\*Next 70 hours per kw-hr.

†Next 260 hours per kw-hr.

## STATEMENT

Cost of Power to Municipalities and Rates to Consumers for  
for the Year 1931, in Urban Municipalities

Municipality	Annual cost to the Commission on the works to serve electrical energy to municipality on a horse power basis	Domestic service					
		Service charge per month	First rate		All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount
			Number of kw-hr. per month	Per kw-hr. per month			
	\$ c.	cents		cents	cents	\$ c.	%
Tilbury.....	37.23	33-66	60	2.5	1.25	0.83	10
Tillsonburg.....	32.17	33-66	60	2	1.2	0.83	10
Toronto.....	24.63	* 3	..	**2	1	0.83	10
Toronto twp.....	30.77	33-66	55	2.8	1.4	1.11	10
Tottenham.....	87.99	33-66	30	7	2	1.67	10
Trafalgar twp., Area No. 1.....	.....	55	60	3.5	2	1.11	10
Trafalgar twp., Area No. 2.....	.....	80-1.11	55	3.5	2	1.67	10
Tweed.....	55.88	33-33	60	6	2	1.11	10
Uxbridge.....	51.87	33-66	50	3.5	1.5	1.11	10
Victoria Harbour....	45.82	33-66	55	3	1.5	1.11	10
Walkerton.....	37.86	33-66	50	3.5	2	1.11	10
Walkerville.....	26.98	33-66	60	2.5	1	0.83	10
Wallaceburg.....	35.48	33-66	60	2.4	1.1	0.83	10
Wardsville.....	55.79	33-66	40	6	2	1.66	10
Warkworth.....	44.77	33-66	50	5	2	1.55	10
Waterdown.....	32.43	33-66	60	2.5	1.25	0.83	10
Waterford.....	29.90	33-66	60	2	1	0.83	10
Waterloo.....	25.83	33-66	60	2	1.25	0.83	10
Watford.....	50.22	33-66	50	4	2	1.11	10
Waubashene.....	44.02	33-66	55	2.5	1.25	1.11	10
Welland.....	22.47	33-66	60	2.2	1.1	0.83	10
Wellesley.....	43.50	33-66	50	3.5	1.5	1.11	10
Wellington.....	44.13	33-66	50	2.5	1.25	0.83	10
West Lorne.....	38.04	33-66	55	3	2	1.11	10
Weston.....	25.52	33-66	60	2	1	0.83	10
Wheatley.....	49.72	33-66	50	4	2	1.39	10
Whitby.....	35.25	33-66	60	3	1.25	0.94	20
Wiarnt.....	58.00	33-66	40	6	2	2.22	10
Williamsburg.....	40.73	33-66	60	3	2	1.39	10
Winchester.....	38.54	33-66	60	2.5	1.25	0.83	10
Windermere.....	100.73	33- <sup>†</sup>	..	8	2	2.22 <sup>†</sup>	10
Windsor.....	26.69	33-66	60	2.5	1	0.83	10
Wingham.....	58.55	33-66	45	4	2	1.11	10
Woodbridge.....	35.17	33-66	60	2.5	1.25	0.83	10
Woodstock.....	25.37	33-66	60	2	1.2	0.83	10
Woodville.....	55.75	33-66	50	4	2	1.11	10
Wyoming.....	52.22	33-66	50	4.5	2	1.11	10
York twp. (including Swansea and Forest Hill).....	.....	33-66	60	2	1.3	0.83	10
Zurich.....	58.24	33-66	50	4	2	1.38	10

NOTE.—Domestic service charge—33 cents per month per service when the permanently installed appliance load is under 2,000 watts and 66 cents per month when over 2,000 watts.

\*Service charge per 100 sq. ft.

\*\*Per kw-hr. for first 3 kw-hr. per 100 sq. ft.

<sup>†</sup>According to consumers demand.



“E”—Concluded

Domestic Service—Commercial Light Service—Power Service

Served by the Hydro-Electric Power Commission

Commercial light service					Power service							
Service charge per 100 watts min. 1000 watts	First 100 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount	Basis of rate 130 hours monthly use of demand	Service charge per h.p. per month	First 50 hr. per month per kw-hr.	Second 50 hr. per month per kw-hr.	All additional per kw-hr.	Minimum or maximum per h.p. per month	Local discount	Prompt payment discount
cents	cents	cents	\$ c.	%	\$ c.	\$ c.	cents	cents	cents	\$ c.	%	%
5	2.5	0.75	0.83	10	22.00	1.00	1.9	1.3	0.33	.....	10	10
5	2	0.6	0.83	10	24.00	1.00	2.3	1.5	0.33	.....	10	10
.....	R 4 & 2	1	0.83	10	.....	D.C. a	2.5	1.25	0.60	.....	.....	10
5	2.8	0.75	1.11	10	23.00	1.00	1.5	0.75	0.33	.....	.....	10
5	7	1	1.67	10	45.00	1.00	2.1	1.4	0.33	.....	19	10
.....	†8											
.....	††4	1	1.11	10	37.00	1.00	3.5	2.3	1	.....	.....	10
10	3.5	2	1.67	10	38.00	1.00	3.5	2.3	1.5	.....	.....	10
5	6	2	1.11	10	35.00	1.00	3.5	2.3	0.33	.....	.....	10
5	3.5	1	1.11	10	35.00	1.00	3.5	2.3	0.33	.....	.....	10
5	3	1	1.11	10	40.00	1.00	4.3	2.8	0.33	.....	.....	10
5	3.5	1	1.11	10	32.00	1.00	3.1	2	0.33	.....	.....	10
5	2.5	0.8	0.83	10	23.00	1.00	2.1	1.4	0.33	.....	10	10
5	2.4	0.6	0.83	10	22.00	1.00	1.9	1.3	0.33	.....	10	10
5	6	1	1.66	10	55.00	1.00	6.5	4.3	0.33	.....	.....	10
5	5	1	1.55	10	44.50	1.00	4.9	3.3	0.33	.....	.....	10
5	2.5	0.75	0.83	10	28.00	1.00	2.5	1.6	0.33	.....	.....	10
5	2	0.75	0.83	10	20.00	1.00	1.6	1	0.33	.....	10	10
5	2.25	1	0.83	10	19.00	1.00	2	1.4	0.33	.....	25	10
5	4	1	1.11	10	43.00	1.00	4.7	3.1	0.33	.....	.....	10
5	2.5	1	1.11	10	33.00	1.00	3.2	2.1	0.33	.....	.....	10
5	2.2	0.6	0.83	10	19.00	1.00	2	1.4	0.33	.....	25	10
5	3.5	0.75	1.11	10	35.00	1.00	3.5	2.3	0.33	.....	.....	10
5	2.5	1	0.83	10	36.00	1.00	3.7	2.4	0.33	.....	.....	10
5	3	1	1.11	10	30.00	1.00	2.8	1.8	0.33	.....	.....	10
5	2	0.6	0.83	10	18.00	1.00	1.9	1.2	0.33	.....	25	10
5	4	1	1.39	10	45.00	1.00	4.9	3.3	0.33	.....	.....	10
5.6	3	1	0.94	20	25.00	1.00	2	1.3	0.33	.....	.....	10
5	6	1	2.22	10	45.00	1.00	4.9	3.3	0.33	.....	.....	10
5	3	1	1.39	10	55.00	1.00	6.5	4.3	0.33	.....	.....	10
5	2.5	1	0.83	10	50.00	1.00	5.7	3.8	0.33	min. 2.22	.....	10
5	8	2	2.22	10	58.00	1.00	6.9	4.6	0.33	.....	.....	10
5	2.5	0.8	0.83	10	23.00	1.00	2.1	1.4	0.33	.....	10	10
5	4	1	1.11	10	38.00	1.00	4	2.6	0.33	.....	.....	10
5	2.5	0.75	0.83	10	22.00	1.00	1.9	1.3	0.33	.....	10	10
5	2	0.6	0.83	10	17.00	1.00	1.7	1.1	0.33	.....	25	10
5	4	1	1.11	10	35.00	1.00	3.5	2.3	0.33	.....	.....	10
5	4.5	1	1.11	10	50.00	1.00	5.7	3.8	0.33	.....	.....	10
5	2	0.75	0.83	10	22.00	1.00	1.6	0.9	0.33	.....	.....	10
5	4	1	1.38	10	50.00	1.00	5.7	3.8	0.33	min. 2.77	.....	10

†First 30 hours per kw-hr.                      R First 70 hours per kw-hr., 4 cents.  
††Next 70 hours per kw-hr.                      Next 70 hours per kw-hr., 2 cents.  
a D.C. Service charge \$1.35 per h.p. for first 10 h.p., plus \$1.00 per h.p. for additional h.p.  
b A.C. Service charge \$1.25 per h.p. for first 10 h.p., plus \$1.00 per h.p. for additional h.p.



# APPENDIX I

## ACTS

### CHAPTER 13

An Act to amend The Power Commission Act.

*Assented to April 2nd, 1931.*

**H**IS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. This Act may be cited as *The Power Commission Act, 1931*. Short title.
2. Section 1 of *The Power Commission Act* is amended by adding thereto the following clauses:
  - (d) "Land" shall mean real property of whatsoever nature or kind, and shall include tenements, hereditaments and appurtenances, and any estate, term, easement, right or interest in, to, over, under or affecting land.
  - (e) "Owner" shall include mortgagee, lessee, tenant, occupant, or any person entitled to a limited estate or interest, and a guardian, committee, executor, administrator or trustee in whom land or any property or interest therein is vested.
3. Sections 20 to 30 of *The Power Commission Act* are repealed and the following substituted therefor:
  - 20.—(1) The Lieutenant-Governor in Council may authorize the Commission at any time and from time to time, to acquire by purchase, lease, or in any other manner, or without the consent of the owner thereof to enter upon, take possession of, expropriate and use, any land, lake, river, stream, or other body of water or watercourse, and temporarily or permanently to divert or alter the boundaries or course of any lake, river, stream or other body of water or watercourse, or raise or lower the level of the same or flood or overflow any land. *New.*
  - (2) In particular, but without limiting the generality of subsection 1 hereof, the Lieutenant-Governor in Council, upon the recommendation of the Commission, may authorize the Commission to

Rev. Stat.,  
c. 57, s. 1,  
amended.

Rev. Stat.,  
c. 57, ss. 20  
to 30  
repealed.

Power may  
be given to  
Commission.



To acquire  
lands, water  
powers and  
works.

- (a) acquire by purchase, lease or otherwise, or without the consent of the owner thereof or of any person interested therein, enter upon, take possession of, expropriate and use, the land, waters, water privileges, water powers and works, of any person owning, holding under lease or otherwise, or developing, operating or using the same for generating, or adapted for generating electrical power or energy or for the transmission thereof in Ontario; and develop and use the same for any of the purposes of this Act; R.S.O. 1927, c. 57, s. 20 (1), cl. *a*;

To acquire  
Dominion  
Power and  
Transmission  
Company  
Limited.

- (aa) acquire by purchase the whole or any part of the property, assets and undertaking of Dominion Power and Transmission Company Limited, including shares held or owned by said company in any other company or companies of any kind or nature whatsoever, and to acquire the whole or any part of the properties, assets and undertakings of such other company or companies and to maintain and operate any property or properties so acquired; 1930, c. 12, s. 4, *part*;

To acquire  
and con-  
struct works  
for produc-  
tion of  
electricity.

- (b) acquire by purchase, lease or otherwise, and construct, maintain and operate, works for the production of electrical power or energy by the use of coal, oil or any other means whatsoever; R.S.O. 1927, c. 57, s. 20 (1) cl. *b*.

Works on  
inter-  
provincial  
boundaries.

- (bb) acquire by purchase, lease or otherwise, lands, waters, water privileges, water powers and works upon or adjacent to the boundary line between Ontario and any other province and situate in Ontario or in such other province, or partly in one and partly in the other of them, and erect, construct, maintain and operate upon any lands so acquired, works for the production and transmission of electrical power or energy, and enter into agreements with the Crown as representing such other province, or with any commission or department of the Government of such other province, or with any corporation or person interested in or affected by such works as to the terms and conditions upon which such works shall be carried on and any rights so acquired be exercised.

Acquiring  
shares in  
companies  
operating  
on such  
boundaries.

- (bbb) acquire by purchase in the open market or otherwise shares or stock of any company owning or controlling any such lands, waters, water privileges, water powers or works; 1930, c. 12, s. 4; *part*;

To acquire  
plant for  
transmission  
of power.

- (c) construct, maintain and operate, and acquire by purchase, lease or otherwise, or, without the consent of the owner thereof or of any person interested therein, enter upon, take possession of, expropriate and use, all erections, machinery, plant and other works and appliances for the transmission, supply and distribution of electrical power or energy; and conduct, store, transmit and supply electrical power

or energy and steam for the purposes of this Act, and, with lines of wires, poles, conduits, pipes, motors or other conductors or devices, receive, conduct, convey, transmit, distribute, supply or furnish such electrical power or energy and steam to or from any person at any place through, over, under, along, upon or across any land, public highway or public place, stream, water, watercourse, bridge, viaduct or railway, and through, over or under the land of any person;

- (d) contract with any person generating, transmitting or distributing electrical power or energy, or proposing so to do, to supply electrical power or energy to the Commission; and require any person generating, transmitting or distributing electrical power or energy to supply so much thereof as the Commission may require; To contract for supply of power to Commission.
- (e) enter upon, take and use, without the consent of the owner thereof, any land upon which any water power or privilege is situate, or any lake, river, stream or other body of water which, in the opinion of the Commission, is capable of improvement or development for the purpose of providing water power, and construct such dams, sluices, canals, raceways and other works as may be deemed proper or expedient for the said purposes, and flood and overflow any land to the extent to which the Commission may deem necessary for the purpose of providing storage of the water or for any other purpose in connection with such works, and contract with any municipal corporation, company or individual for the use of any of the improvements or works so made, on such terms and conditions as may be agreed on; To flood lands and improve water powers.
- (f) enter upon, take and use, without the consent of the owner thereof, any land which may, in the opinion of the Commission, be necessary for the full enjoyment and exercise of any water right, water privilege or improvement undertaken by the Commission or by any municipal corporation or for the relief of the municipal corporation from liability for damages for the flooding or overflowing of such lands; but subject to the provisions of subsections 1 and 2 of section 30, the proceedings taken under this paragraph shall be at the sole expense of the municipal corporation, and the Commission may convey the lands so acquired to such corporation or make such other disposition thereof with the consent of such corporation as may be deemed expedient; To acquire flooded lands on behalf of municipality.
- (g) acquire by purchase or expropriate any plant, machinery, appliances, wire, poles and other equipment, and the land occupied by or used in connection therewith or any part thereof, used or intended for the distribu- To acquire distributing plant.

- Purchasing shares in companies.
- To acquire stock in development companies.
- To lease or operate works of others.
- To issue bonds, etc., for above purposes.
- The Commission to have powers of Minister of Public Works.
- tion of electrical power or energy in a municipality, the corporation of which has entered into an agreement with the Commission for the supply of electrical power or energy, and contract for the sale and transfer to such municipal corporation of such plant, equipment and land upon such terms and for such price, not being less than the price paid by the Commission, with the expenses in connection with such purchase or expropriation added thereto, as may be agreed upon; but if part only of the property is taken the damage done to the property by the severance shall be taken into consideration in determining the compensation; R.S.O. 1927, c. 57, s. 20 (1), cls. *c-g*.
- (gg) acquire from time to time by purchase in the open market or otherwise, shares or stock in or the securities of any incorporated company carrying on the business of developing, distributing or transmitting electrical power or energy and for the purposes of this Act the acquisition of such shares, or stock, or securities shall be an investment in works; 1930, c. 12, s. 5;
- (h) acquire by purchase or otherwise on any terms and hold shares in any incorporated company carrying on the business of developing, supplying or transmitting electrical power or energy; and in connection with any such acquisition enter into any covenants and agreements, and pay for any such shares either in cash or in bonds, debentures or other securities of the Commission, and guarantee, or covenant or agree for or in respect of the payment or performance of any bonds, debentures, securities, contracts or obligations of any company shares in which are so acquired, or of any company shares in which are held by any company in which shares are so acquired; and for the purposes of this Act the acquisition of shares of such companies shall be deemed to be an investment in works.
- (i) lease or operate the works for the generation, transmission, distribution or use of electrical energy of any person, firm or corporation on such terms as the Commission may arrange with the owner;
- (j) issue bonds, debentures or other securities of the Commission for any of the purposes set out in this section, in such form and containing such terms and at such rate of interest and payable in such manner and at such time or times as the Lieutenant-Governor in council may determine. R.S.O. 1927, c. 57, s. 20, subs. 1, cls. *h-j*.
- (3) In relation to all matters authorized by the Lieutenant-Governor in Council under any of the provisions of this section, the Commission shall have, and may exercise and enjoy, in addition to the powers conferred by this or any other Act, all the powers conferred upon the Minister of



Public Works in relation to a public work by *The Public Works Act*, and in the application of this section, where the words "The Minister," "The Department" or "The Crown" appear in the said Act, they shall, where the context permits mean and include the Commission.

- (4) Upon the deposit in the proper Registry or Land Titles Office <sup>Mode of perfecting title.</sup> of a plan and description of the land required by the Commission, signed by the Secretary or by an Ontario Land Surveyor, the land so described shall thereupon become and be vested in the Commission.
  - (5) Except as otherwise provided in this Act the Commission <sup>Procedure.</sup> shall in the exercise of its compulsory powers, authorized by this section and section 26, proceed in the manner provided by *The Public Works Act*, where the Minister of Public Works takes land or property for the use of Ontario, and all the provisions of that Act with respect to the fixing, payment and application of compensation shall *mutatis mutandis* apply.
  - (6) Where the Commission elects to have the compensation <sup>Powers of Board.</sup> determined by the Ontario Railway and Municipal Board, under the provisions of section 28 of *The Public Works Act*, the Board shall in addition to the powers conferred upon it by the said section 28 of *The Public Works Act*, and by *The Railway and Municipal Board Act*, have the power, upon the application of the Commission or the owner, to direct the filing and serving of pleadings, and particulars thereof, and to direct discovery and production as in actions in the Supreme Court, and in accordance with the rules of practice in that behalf.
  - (7) The Lieutenant-Governor in Council may direct that any authorization to the Commission heretofore or hereafter given shall be retroactive, when the same shall be deemed to have taken effect from the time so fixed.
  - (8) No act or proceeding of the Commission pursuant to any authorization of the Lieutenant-Governor in Council under this section shall be restrained by injunction or other process or proceeding in any court. *New.*
- 21.—(1) Notwithstanding any thing in this or any other Act, whenever the Commission has been authorized by the Lieutenant-Governor in Council to exercise any of the powers set out in clause *c* of subsection 2 of section 20 it may proceed under the following provisions of this section.
- (2) The Commission may without notice and without the deposit of any plan or description or any prerequisite or preliminary action or formality, and with or without the consent of the owner thereof, enter upon, take possession of and use for such time as the Commission may deem desirable any land which the Commission may deem to be required for the due exercise of the powers so authorized. <sup>Mode of exercising and extent of powers.</sup>

Compensation

- (3) Compensation shall be made to the owner for the land taken or used and for all damage to property resulting from the exercise of the said powers, and in fixing such compensation regard shall in all cases be had to the value of the land taken, or to the nature and extent of the estate, right, privilege, easement, or interest which the Commission decides to take and acquire in, over, upon or in respect of the land as the case may be, and the compensation shall be based thereon.

Rev. Stat.  
c. 57,  
How far to  
apply.

- (4) Where the amount of the compensation has been agreed upon or fixed or otherwise determined, all of the provisions of *The Public Works Act* as to the payment or other disposition and application of the compensation or money payable in respect of the land, right or easement taken by the Commission shall, *mutatis mutandis*, apply.

Appoint-  
ment of  
and powers  
of valuator.

- (5) The Lieutenant-Governor in Council may from time to time appoint some suitable person as a valuator, who shall receive his reasonable and necessary travelling and other expenses and such salary as may be fixed by the Lieutenant-Governor in Council, and the same shall be paid by the Commission as part of its general administration expense. When no agreement is arrived at as to the amount of compensation to be paid to the owner, the valuator shall as soon as conveniently may be after a request to him either from the owner or the Commission, secure from the Commission a description of the land, right or easement which the Commission requires or has taken from the owner and make such inquiries and inspection and procure such expert advice as he may think desirable and in accordance with subsection 3 fix and determine the compensation to be paid for such land, right or easement, or property damage, and notify by registered letter the owner and the Commission of such finding.

Appeal from  
valuator.

- (6) Either the owner or the Commission, if dissatisfied with the amount of the compensation so fixed, may appeal within thirty days after the mailing of the notice of finding by the valuator by giving notice to the other that an appeal is desired from the same.

Who to hear  
appeals.

- (7) An appeal from the valuator shall be heard and determined by the Ontario Railway and Municipal Board or a member thereof; provided however that the Lieutenant-Governor in Council may from time to time designate a judge of the Supreme Court or a judge of a county or district court to hear and dispose of any such appeal or appeals, and where the Commission gives notice to the owner that an appeal shall be determined by a judge instead of by the Board or a member thereof, the judge designated shall hear and determine such appeal. If a judge is so designated he shall receive his reasonable and necessary travelling expenses and such fee as may be fixed from time to time by the Lieutenant-Governor in Council and the same shall be paid

by the Commission as part of its general administration expenses.

- (8) The judge or the Board or any member thereof, as the case may be, shall appoint such time and place and give such notice of the hearing of appeals as may be thought proper and most convenient and such judge or Board or any member thereof shall for the purposes of this section have all the powers which are conferred upon the Ontario Railway and Municipal Board by subsections 3 and 4 of section 20 of *The Railway and Municipal Board Act* and the provisions of that Act with respect to procedure and the enforcement of orders made hereunder from time to time shall, *mutatis mutandis*, apply. Powers of judge or Board on appeal.
- (9) In the notice of appeal the appellant shall set out the amount which the appellant deems proper to have been fixed by the valuator and if, where the owner is the appellant, he fails to recover anything more than the amount fixed by the valuator, or if where the Commission is the appellant it fails to have the amount so fixed reduced, then the costs of the proceedings as between party and party shall be payable by the appellant. If under the provisions of this subsection the costs are payable to the Commission the same may be deducted from the compensation payable. Costs of appeal.
- (10) The costs of the proceedings may be fixed by the judge or Board or member thereof at such amount as may be deemed proper, due regard being had however to the difference between the amount fixed by the valuator and the amount awarded by the judge or Board or member thereof, or may be directed to be taxed upon the scale of the division, county or Supreme Court scale, as the case may be. If it appears on such appeal that the claim to compensation put forward by the owner is grossly excessive, and the expense of the Commission has been thereby increased, the judge or Board or member thereof may fix and allow to the Commission by way of set-off against such costs as may be awarded to the owner hereunder, the amount of such excess expense. Scale of costs.
- (11) The owner shall upon reasonable notice attend at a place to be fixed by the Commission, and execute such necessary instruments or documents as the Commission may require upon tender to him of the Commission's cheque for the amount awarded by the judge or Board or member thereof or fixed by the valuator, and costs, if any, less such costs as may have been awarded against him, and in the event of his failing to attend and execute such instruments or documents, or if for any reason the Commission deems it desirable, the Commission may file in the registry office or land titles office, as the case may be, in the district or county in which the land affected is situate, a plan and description of the land, right or easement so taken, signed by the Secretary of the Commission, or by an Ontario Land Surveyor, and thereupon such land, right or easement shall be and become vested in the Commission. Mode of perfecting title.



Appeals.

22.—(1) In cases under section 21, either the Commission or the owner may, subject to the provisions of subsection 2 of section 23a, appeal to the Appellate Division from the order of the judge or the Board or member thereof, and in all other cases, either the Commission or the owner may appeal to the Appellate Division from the order of the judge or the Board as the case may be.

(2) Where the appeal is taken under the provisions of subsection 1, section 47 of *The Railway and Municipal Board Act* as to appeals from the Board shall apply.

Removal of trees and obstructions beside right-of-way.

23. The powers conferred upon the Commission by or under the authority of this Act, shall include the right to enter upon any land upon either side of the right-of-way acquired for the transmission or distribution lines or works of the Commission, or upon any land upon either side of such lines or works, and to fell or remove any trees or branches thereof or any other obstruction upon any such land or upon any public highway or place which, in the opinion of the Commission, it is necessary to fell or remove, but subject always to the payment of compensation as provided in section 21 of this Act, and the said section shall apply to the exercise of the powers mentioned in this section. R.S.O. 1927, c. 57, s. 23.

Owner to give notice of crop damage.

23a.—(1) Notwithstanding anything in section 21 where a claim is made against the Commission for damage to crops, gardens, shrubs, trees or other growing things, caused by or incidental to the construction, maintenance or repair of poles, wires, towers, or works included in or connected with power transmission lines, notice of such claim shall be given in writing, signed by the claimant at as early a date as possible, and so that the nature, character, extent and evidence of the damage may still be apparent, and in any case, not later than sixty days after the cause for complaint arose.

Effect of failure to give notice.

(2) If a claim is made after the time limited by subsection 1, and the claimant has failed to give the notice therein required, either the Commission or the owner may notwithstanding such failure, request the valuator to attend and investigate the damage complained of. The valuator, if satisfied that there was reasonable excuse for the failure to give or the insufficiency of, the notice, and that the Commission was not thereby prejudiced, may award such compensation as may appear to him to be just and in that event, the finding of the valuator shall be final and binding upon the owner, and the Commission. *New.*

Powers of Commission as to wires, poles and conduits.

24. In the exercise of the powers conferred and in carrying out any work authorized by this Act or any other general or special Act, the Commission has and always has had authority to carry its wires along, upon, under and across any public highway or street, and to erect poles and put down conduits and all other structures necessary for that purpose, and to

take down, remove, or take up the same without taking any of the proceedings prescribed by this Act for the taking of land without the consent of the owner thereof, and the provisions of this Act with regard to compensation for lands so taken shall not apply, but the location of any poles, conduits, lines or other structures of the Commission to be hereafter erected, put down or constructed upon a highway shall be agreed upon by the Commission and the municipal corporation or other authority having control of the highway, or in case of disagreement shall be determined by the Ontario Railway and Municipal Board. R.S.O. 1927, c. 57, s. 24.

25. Wherever in the course of constructing, reconstructing, altering or improving any highway it becomes necessary to take up, remove or change the location of poles, wires, conduits, transformers or other appliances or works placed on or under a highway by the Commission, the costs and expenses incurred in such work shall be apportioned and paid in the manner provided by sections 2 and 3 of *The Public Service Works on Highways Act*, and the said section shall apply to the Commission in the same manner and to the same extent as to a municipal corporation, commission, company or individual owning or operating appliances or works mentioned in the said section. R.S.O. 1927, c. 57, s. 25. Cost of improvements.  
Rev. Stat., c. 56.
- 26.—(1) The Commission may expropriate, purchase, lease or otherwise acquire lands which the Commission may deem necessary for office, service, or other buildings, and may erect thereon such buildings and works as the Commission may require for its purposes. Buildings.
- (2) All expenditures by the Commission for the purposes mentioned in subsection 1 shall be repayable to the Commission by the municipal corporations having contracts with the Commission, and shall be repaid by annual sums sufficient to form in forty years a sinking fund for the repayment of the cost thereof. R.S.O. 1927, c. 57, s. 26. Expense repayable by municipalities.
27. The Commission may, upon such terms as it deems proper, lease, sell or otherwise dispose of any property, real or personal, which the Commission may deem unnecessary for its purposes. R.S.O. 1927, c. 57, s. 27. Sale of lands no longer required.
- 28.—(1) Where any of the compulsory powers mentioned in section 20 are exercised with respect to land, and no entry on or use of the land taken has been made, except for the purpose of survey or examination, the Commission, at any time before the expiration of three months from the date of the award, may, by writing under the hand of the chairman and the seal of the Commission, registered in the proper registry or land titles office, declare that the land or any part thereof is not required and is abandoned by the Commission; and thereupon the land declared to be abandoned shall revert in the person from whom it was taken, or in those entitled to claim under him. Abandonment of lands after expropriation.
- (2) Where the land taken, or any part thereof, is abandoned, the person from whom it was taken shall be entitled to all damages Total abandonment.

Partial  
abandon-  
ment.

Rev. Stat.,  
c. 52.

Extent of  
powers of  
expropria-  
tion.

Adjustment  
of propor-  
tions of cost  
of works on  
waters.

Apportion-  
ment of costs  
of works  
heretofore  
constructed.

sustained and all costs incurred by him in consequence of the taking and abandonment; and where part only of the land is abandoned the fact of such abandonment and the damages, if any, sustained in consequence of that which is abandoned having been taken, and all the other circumstances of the case shall be taken into account in determining the amount to be paid to any person claiming compensation, and the amount of the damages, shall, subject to the provisions of section 21, be determined in the manner provided by *The Public Works Act*, and if a reference as to compensation is pending, shall be determined on such reference. R.S.O. 1927, c. 57, s. 28.

29. The compulsory powers conferred by this Act shall extend to land, works, rights, powers, privileges and property notwithstanding that they are or may be deemed to be devoted to a public use or that the owner thereof possesses the power of taking land compulsorily. R.S.O. 1927, c. 57, s. 29.
- 30.—(1) Where in the exercise of the powers conferred by this Act the Commission constructs any works or improvements upon any lake, river, stream or other body of water the Lieutenant-Governor in Council may direct a judge of the Supreme Court or the judge of the county or district court to enquire into and determine the proportion in which any municipal or other corporation, company or individual owning a water power or water power site, whether developed or not, is benefited by such works or improvements and the judge may make an order fixing the proportion in which the cost of such works and improvements shall be borne by any such municipal or other corporation, company or individual and by the Province respectively.
- (2) Where under an agreement or any instrument purporting to be an agreement with a municipal corporation the Commission has heretofore constructed works or improvements upon any lake, river, stream or other body of water and it appears to the Lieutenant-Governor in Council that such works or improvements are or may be of benefit to, or increase the value of the land of any individual or corporation other than such municipal corporation, the Lieutenant-Governor in Council may direct a judge of the Supreme Court, or a judge of a county or district court, to inquire into and determine the proportion in which such municipal corporation and any such individual or other corporation are or may be respectively benefited or the value of the land of any of them increased by such works or improvements, and the judge may make an order fixing the portion in which the cost of such works or improvements shall be borne by the municipal corporation party to such agreement or instrument, and by any such individual or corporation and by the Province respectively, and may fix such proportion without regard to the terms of such agreement or instrument. 1929, c. 20, s. 4.



- (a) The judge, upon an inquiry under this section, shall have the like powers as a judge sitting in court including the power to compel the attendance of witnesses, to hear evidence on oath and to require the production of books, papers, documents, matters and things and the order of the judge shall be enforceable in the manner provided by *The Judges' Orders Enforcement Act*. 1930, c. 12, s. 6. Judge's powers on inquiry as to apportionment of costs of waterway improvement. Rev. Stat., c. 111.
- (3) No costs shall be awarded to any party appearing before the judge or otherwise interested in the inquiry. 1929, c. 20, s. 4. When costs not to be awarded.
- (4) The judge shall be paid such fees and expenses as shall be fixed by the Lieutenant-Governor in Council. 1929, c. 20, s. 4. Fees and expenses.
- (5) For the purposes of this section the cost of the works or improvements shall be deemed to include all expenditures, charges and expenses as fixed by the Commission made or incurred by it in respect of the construction of such works or improvements, extensions and additions thereto, interest charges, operating expenses, repairs and maintenance, down to the date of the order of the judge, the fees and expenses of the judge and the expenses incurred by the Commission in connection with the inquiry. 1929, c. 20, s. 4. Cost of works, etc.,—what to include.
- (6) Any person, or any municipal or other corporation affected by the order made under the authority of subsection 1 or subsection 2 may, with the consent in writing of the Commission, appeal from such order to the Appellate Division. 1929, c. 20, s. 4. Appeal.
- (7) (a) The Commission may establish a sinking fund to be provided by the parties in the proportions directed by the order of the judge sufficient to discharge and pay off the cost of such works or improvements and such of the capital costs as may be incurred from time to time by the Commission after the date of the order of the judge within such periods as the Commission may fix having regard to the life of such works or improvements and not exceeding forty years. 1929, c. 20, s. 4. Sinking fund.
- (b) The Commission shall subsequent to the order of the judge annually fix and determine the costs, charges or expenses incurred by it from time to time in the operation, maintenance, repair and renewal of such works and shall apportion and charge the same against the parties in the proportions fixed by the order of the judge together with the payments in respect of sinking fund hereinbefore mentioned and the amounts so charged shall be payable on demand recoverable in the manner hereinafter provided. 1929, c. 20, s. 4. Annual apportionment of costs by Commission.
- (8) In fixing the amounts so payable the Commission shall give credit for any amount theretofore contributed to the cost of such works and improvements by a municipal or other corporation or by any individual. 1929, c. 20, s. 4. Allowance for previous expenditure.
- (9) The amount so found payable by a municipal corporation shall be recoverable in the like manner as in the case of a Recovery of amount assessed.

charge for any other service rendered by the Commission to a municipal corporation and in the case of any other corporation or of an individual the amount so found due shall constitute a debt due to the Commission and shall be recoverable in any court of competent jurisdiction from the owners from time to time of the lands so found by the order of the judge to be benefited by such works or improvements and shall constitute a lien or charge upon such lands enforceable in the same manner and by the same proceedings as nearly as may be as in the case of a charge in favour of the Crown. 1929, c. 20, s. 4.

Share of  
Province,—  
how  
payable.

- (10) Where a proportion of the cost of such works and improvements is to be borne by the Province the amount due from time to time in respect thereof shall be payable out of any moneys appropriated by the Legislature for that purpose. 1929, c. 20, s. 4.

How far  
order to be  
final and  
binding.

- (11) When the proportions in which the cost of such works or improvements is to be borne have been fixed by order of the judge or of the Appellate Division such order shall be final and binding unless and until it shall appear to the Commission that owing to change of circumstances or conditions in respect of such works or improvements it is equitable that there should be a readjustment of the proportions theretofore fixed by the order of the judge and in that case upon the application of any person liable to contribute to the cost of such works or improvements, made with the consent in writing of the Commission, the judge may make further inquiry and may readjust such proportions to be thereafter applied in such manner as he may deem just and equitable subject to appeal as hereinbefore provided. 1929, c. 20, s. 4.

Rev. Stat.,  
c. 57, s. 49,  
subs. 5,  
amended.

4. Subsection 5 of section 49 of *The Power Commission Act* is amended by inserting the words "principa or" before the words "sinking fund" in the fifth line thereof, and is further amended by inserting the word "of" before the word "interest" in the fifth line thereof.

Rev. Stat.,  
c. 57, s. 64,  
subs. 8  
(1929,  
c. 20, s. 6),  
amended.

5. Subsection 8 of section 64 of *The Power Commission Act* as enacted by section 6 of *The Power Commission Act, 1929*, is amended by inserting after the word "costs" in the tenth line thereof the words "at any time," and is further amended by inserting after the word "area" in the eleventh line thereof the words "whether under this Act or *The Local Improvement Act*," and is further amended by adding before the word "only" in the thirteenth line thereof the following words, "it shall not be necessary to levy any special rate under *The Local Improvement Act* to provide for the payments which would otherwise be levied under the said Act in respect of the lands included in the area;"

Street  
lighting  
on local  
improve-  
ment plan.

Rev. Stat.,  
c. 57, s. 80,  
amended.

6. Section 80 of *The Power Commission Act* is amended by adding thereto the following subsection:

Proving  
regulations  
as to installa-  
tions, etc.

- (12) The regulations passed pursuant to this section may be proved by the production of a copy of such rules and regulations certified to by the Secretary and bearing the seal of

the Commission and the production of such certified copy bearing the seal of the Commission shall be *prima facie* evidence of the due execution thereof by the said Secretary.

7. Section 81 of *The Power Commission Act* is amended by adding thereto the following subsections:

- (5) The provisions of this section shall not apply to any by-law or by-laws authorizing the issue of debentures to defray the cost of, or to repay temporary loans incurred in connection with any works mentioned in subsection 1 hereof, when the estimated cost of such works and the borrowing of such estimated cost has been approved by the Commission and the principal amount of the debentures so authorized does not exceed the estimated cost aforesaid by more than five per cent. Rev. Stat., c. 57, s. 81, amended. Municipal debentures for extension or improvement.
- (6) Equipment, plant and works constructed and erected on petition only as defined in clause *n* of subsection 1 of section 2 of *The Local Improvement Act* shall not be deemed extensions or improvements within the meaning of this section. Restriction as to application of local improvement by-law.

8.—(1) Subsection 1 of section 97 of *The Power Commission Act* is amended by inserting before the word "Notwithstanding" at the commencement thereof the words "Except as provided in this section." Rev. Stat., c. 57, s. 97, subs. 1, amended.

(2) Subsection 2 of section 97 of *The Power Commission Act* is amended by striking out the words "at its first meeting in each year" in the tenth line and is further amended by striking out the word "or" in the thirteenth line and substituting therefor the word "and." Appointment of municipal commissions.

(3) Section 97 of *The Power Commission Act* is amended by adding thereto the following subsection: Rev. Stat., c. 57, s. 97, amended.

- (3) The order of the appointment of Commissioners provided for in subsection 2 shall be that the Commission may, if it sees fit to do so and has not at the time the vacancy occurs an appointee holding office on the municipal commission, first make an appointment. If the Commission desires to defer its appointment until the next vacancy occurs the council of the city shall make such appointment, but nothing in this subsection or in subsection 2 shall have the effect of removing from office any member of such municipal commission until his term of office shall have expired. Order of appointments on city commission.

9. Subsection 1 of section 98 of *The Power Commission Act* is amended by adding thereto the following as clause *c*: Rev. Stat., c. 57, s. 98, subs. 1, amended.

- (c) Act as director, officer or employee of any company referred to in clause (a), or having any interest referred to in clause (b), or act as trustee, agent or representative of any firm or individual in respect of any business or interest referred to in clause (a) or clause (b). Prohibition of municipal commissioners being interested in certain concerns.

10. The two agreements each dated 30th day of April, A.D. 1930, for sale and transfer to Wahnapiatae Power Company Limited by its two subsidiary companies, Upper Wahnapiatae River Improvement Company Limited and Wahnapiatae Boom and Timber Slide Company Limited, of all the properties, rights, assets, franchises and under- Sale of Wahnapiatae Company's assets confirmed.



takings of each of the said subsidiary companies respectively, and also the agreement dated 30th day of April, A.D. 1930, for sale and transfer by Wahnapiatae Power Company Limited of all its properties, rights, assets, franchises and undertakings to The Hydro-Electric Power Commission of Ontario in which the Montreal Trust Company joined as a Party are all hereby confirmed and declared to be legal, valid and binding to all intents and purposes and to have been authorized by 1930, c. 16. *The Power Commission and Companies Transfer Act, 1930.*

Sale of  
Galletta  
Company's  
assets  
confirmed.

**11.** The agreement dated the 30th day of April, A.D. 1930, for sale and transfer by The Galletta Electric Power and Milling Company Limited of all its properties, rights, assets, franchises and undertakings to The Hydro-Electric Power Commission of Ontario is hereby confirmed and declared to be legal, valid and binding to all intents and purposes.

Agreements  
for transfer  
of assets of  
certain  
companies  
confirmed.

**12.** The agreement dated the 31st day of March, A.D. 1930, for sale and transfer by Public Utilities Consolidated Corporation of all its Ontario properties, rights, assets, franchises and undertakings to The Hydro-Electric Power Commission of Ontario, and the two agreements each dated the 1st day of October, A.D. 1930, for sale and transfer by The Walkerton Electric Light and Power Company Limited and by The Saugeen Electric Light and Power Company of Ontario Limited of all the properties, rights, assets, franchises and undertakings of each of the said companies respectively to The Hydro-Electric Power Commission of Ontario are all hereby confirmed and declared to be legal, valid and binding to all intents and purposes.

Confirma-  
tion of title.

**13.** All and every part of the properties, assets, contracts, easements, rights, privileges, licenses, franchises and undertakings agreed to be sold to the Commission by any of the said agreements mentioned in sections 8, 9 and 10 or conveyed or purported to be conveyed to the said Commission thereby shall be, and shall be deemed to have been from the date of the respective agreement selling, conveying or purporting to convey the same, vested in and the property of the Commission free from all liens, charges and encumbrances save only that everything agreed to be sold, conveyed or purported to be conveyed under the said agreement for sale and transfer from Wahnapiatae Power Company Limited to The Hydro-Electric Power Commission of Ontario dated the 30th day of April, A.D. 1930, shall be subject to the indenture of mortgage dated the 1st day of November, A.D. 1924, given by the Wahnapiatae Power Company Limited to Montreal Trust Company as provided in *The Power Commission and Companies Transfer Act, 1930.*

1930, c. 16.

By-laws  
confirmed.

**14.** By-law number 1317 of the corporation of the town of Napanee; by-laws numbers 854 and 855 of the corporation of the town of Deseronto; by-law number 818 of the corporation of the town of Southampton; by-laws numbers 1462, 1463 and 1482 of the corporation of the town of Walkerton; by-laws numbers 306 and 307 of the corporation of the town of Wiarton; by-law number A 196 of the corporation of the village of Brighton; by-laws numbers 265 and 267 of the corporation of the village of Cardinal; by-laws numbers 706 and 707 of the corporation of the village of Hastings; by-law number 442

of the corporation of the village of Madoc; by-laws numbers 778, 779 and 786 of the corporation of the village of Port Elgin; by-law number 391 of the corporation of the village of Stirling; by-law number 351 of the corporation of the village of Tweed; by-law number 31 of 1929 of the corporation of the village of Windermere; by-law number 182 of the corporation of the township of Ameliasburg; by-law number 785 of the corporation of the township of Ancaster; by-law number 1047 of the corporation of the township of Bastard and Burgess South; by-laws numbers 614 and 615 of the corporation of the township of Camden East; by-law number A-11 of the corporation of the township of Crosby South; by-law number 1078 of the corporation of the township of East Whitby; by-law number 1228 of the corporation of the township of Hamilton; by-law number 420 of the corporation of the township of Hillier; by-law number 488 of the corporation of the township of Hungerford; by-law number 256 of the corporation of the township of Kingston; by-law number 704 of the corporation of the township of Lobo; by-law number 134B of the corporation of the township of Loughborough; by-laws numbers 1049 and 1050 of the corporation of the township of Manvers; by-law number 698 of the corporation of the township of Medonte; by-law number 604 of the corporation of the township of Rainham; by-law number 549 of the corporation of the township of Rawdon; by-law number 410 of the corporation of the township of Stamford; by-law number 9 of 1930 of the corporation of the township of Thorold; by-law number 455 of the corporation of the township of Trafalgar; by-law number 936 of the corporation of the township of Walpole; by-law number 2 of 1930 of the corporation of the township of Wolford; and all debentures issued or to be issued or purporting to be issued under any of the said by-laws which authorize the issue of debentures are confirmed and declared to be legal, valid and binding upon such corporations and the ratepayers thereof respectively and shall not be open to question upon any ground whatsoever notwithstanding the requirements of *The Power Commission Act* or the amendments thereto or any other general or special Act of this Legislature.

15. This Act shall come into force on the day upon which it receives the Royal Assent. Commence-  
ment of Act.

## CHAPTER 14

### An Act to amend The Guelph Railway Act, 1921

*Assented to April 2nd, 1931.*

**H**IS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. This Act may be cited as *The Guelph Railway Act, 1931*.

Short title

2. *The Guelph Railway Act, 1921*, as amended by *The Guelph Railway Act, 1923*, is further amended by adding thereto the following section:

1921, c. 22,  
amended.

Bond issue  
by the Com-  
mission.

6a.—(1) The Commission is hereby authorized without obtaining the consent of the corporation to issue bonds of the Commission to the principal amount of \$300,000, dated 1st May, 1931, bearing such rate of interest, not exceeding 5 per centum per annum maturing on such date not later than 1st May, 1971, payable at such place and being in such form as the Commission may determine, and to sell, pledge or otherwise dispose of the said bonds upon such terms as the Commission may determine. The said bonds and any proceeds from the sale, pledge or other disposition thereof, to the extent that the same may be necessary, shall be employed by the Commission in repaying or retiring bonds of the Commission to the principal amount of \$300,000 maturing 1st May, 1931, heretofore issued by the Commission under the authority of section 4, including any of said bonds maturing 1st May, 1931, which have been acquired by the Commission.

Bonds may  
be guaran-  
teed by  
Province.

(2) The Lieutenant-Governor in Council may authorize the Treasurer of Ontario for and on behalf of the Province, to guarantee the payment of the principal of, and interest on the bonds of the Commission authorized by this section, and the form of the guarantee and the manner of its execution shall be determined by the Lieutenant-Governor in Council.

Application  
of debentures  
heretofore  
issued.

(3) Upon the payment or retirement, or provision for the payment or retirement of the said bonds of the Commission to the principal amount of \$300,000, maturing 1st May, 1931, debentures to the principal amount of \$300,000 heretofore issued by the corporation, and deposited with the Commission pursuant to section 5, shall be held and dealt with by the Commission and the corporation in the manner and upon the terms and conditions and for the purposes set forth in section 5, and in the agreement set out as schedule "A" to the same extent and effect as if the said debentures had been issued and deposited with the Commission in respect of the bonds of the Commission authorized to be issued under this section, instead of the said bonds maturing 1st May, 1931, and all the provisions of this Act and the said agreement relating to the said bonds, maturing 1st May, 1931, shall apply equally to the bonds authorized to be issued by the Commission under this section, provided that an annual sinking fund sufficient to repay at their maturity the bonds to be issued under this section, shall be set aside in each year during the currency of said bonds, and until applied to the repayment of said bonds at maturity, may be invested in securities authorized for investments by trustees in Ontario.

1921, c. 22,  
s. 5, subs. 5,  
amended.

3. Subsection 5 of section 5 of *The Guelph Railway Act, 1921*, as amended by *The Guelph Railway Act, 1923*, is amended by striking out the words "under section 9" in the fourth line and by substituting therefor the word "hereunder."

Commence-  
ment of Act.

4. This Act shall come into force on the day upon which it receives the Royal Assent.



## APPENDIX II

### TRANSMISSION LINE RECORDS

Corrected to October 31, 1931

including

Summaries of data respecting mileage of transmission lines built or acquired by the Hydro-Electric Power Commission. The sizes, materials, lengths, and weights of conductors, and other particulars of the high-voltage steel-tower transmission lines, the wood-pole transmission lines—excepting 4,000 volts or less—and the telephone lines.

## TRANSMISSION LINE RECORDS—ALL SYSTEMS

The total mileage of lines built and acquired by the Commission up to October 31, 1931, for the various systems, excepting all lines operating at less than 4,000 volts, is indicated in the following table:

## TOTAL MILEAGE OF TRANSMISSION LINES

System and type of construction	Miles
Niagara system—220,000-volt, steel-supported transmission lines—Line 1.....	198.97
Niagara system—220,000-volt, steel-supported transmission lines—Line 2.....	202.03
Niagara system—220,000-volt, steel-supported transmission lines—Line 3.....	202.56
Northern Ontario system—132,000-volt, steel-supported transmission lines.....	189.00
Niagara system—110,000-volt, steel-supported transmission lines.....	731.91
Niagara system—110,000-volt, wood-supported transmission lines.....	68.75
Eastern Ontario system—110,000-volt, steel-supported transmission lines.....	52.93
Eastern Ontario system—110,000-volt, wood-supported transmission lines.....	61.58
Thunder Bay system—110,000-volt, steel-supported transmission lines.....	82.12
Thunder Bay system—110,000-volt, wood-supported transmission lines.....	82.75
Thunder Bay system—12,000-volt, wood-supported transmission lines.....	1.45
Georgian Bay system—110,000-volt, wood-supported transmission lines.....	55.83
Niagara system—90,000-volt, steel-supported transmission lines.....	65.72
Niagara system—60,000-volt, steel-supported transmission lines.....	54.07
Niagara system—60,000-volt, wood-supported transmission lines.....	17.12
Niagara system—46,000-volt, steel-supported transmission lines.....	16.94
Niagara system—46,000-volt, wood-supported transmission lines.....	21.54
Niagara system—30,000-volt, wood-supported transmission lines.....	13.29
Niagara system—26,400-volt, wood-supported transmission lines.....	569.17
Niagara system—13,200-volt, wood-supported transmission lines.....	446.61
Niagara system—12,000-volt, wood-supported transmission lines.....	180.32
D.P. & T. system—44,000-volt, steel-supported transmission lines.....	37.37
D.P. & T. system—44,000-volt, wood-supported transmission lines.....	153.85
D.P. & T. system—22,000-volt, wood-supported transmission lines.....	28.23
D.P. & T. system—22,000-volt, concrete pole transmission lines.....	10.55
D.P. & T. system—11,500-volt, wood-supported transmission lines.....	7.33
D.P. & T. system—10,000-volt, wood-supported transmission lines.....	6.76
Georgian Bay system—(38,000-volt).....	54.28
Georgian Bay system—(6,600-volt).....	2.30
Georgian Bay system—	
Severn district—(22,000-volt).....	175.88
Eugenia district—(22,000-volt).....	322.78
Wasdells district—(22,000-volt).....	82.95
Muskoka district—(38,000-volt and less).....	26.47
Eastern Ontario system—	
Central Ontario district—(44,000-volt and less).....	509.59
St. Lawrence district—(44,000-volt).....	120.02
Rideau district—(26,400-volt).....	76.96
Madawaska district—(33,000-volt and less).....	70.26
Northern Ontario system—	
Nipissing district—(22,000-volt).....	51.06
Sudbury district—(22,000-volt).....	33.23
Total.....	5,084.53
Total separate wood-pole telephone lines for high-voltage systems.....	1,131.06

NOTE.—Of the above the Niagara system and a part of the Northern Ontario system are operated at 25 cycles. The other systems are operated at 60 cycles.

## TRANSMISSION LINE RECORDS—ALL SYSTEMS

## TOTAL MILEAGES AND WEIGHTS OF CONDUCTORS

Type of construction	Wire miles of conductor			Weight in pounds		
	Completed to Oct. 31, 1930	Completed Oct. 31, 1930, to Oct. 31, 1931	Under construction Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930, to Oct. 31, 1931	Under construction Oct. 31, 1931
High-voltage lines, 220,000 volts, Niagara system.....	1,218.39	592.29	.....	6,587,834	3,202,512	.....
High-voltage lines, 132,000 volts, Northern Ontario system.....	.....	1,134.00	.....	.....	3,161,592	.....
High-voltage lines, 110,000 volts and less, Niagara system.....	5,305.83	19.20	.....	16,297,530	79,065	.....
High-voltage lines, 110,000 volts, Thunder Bay system.....	745.44	.....	.....	1,921,773	.....	.....
High-voltage lines, 110,000 volts, Eastern Ontario system.....	351.42	.....	.....	1,390,773	.....	.....
High-voltage lines, 110,000 volts, Georgian Bay system.....	176.67	.....	.....	231,104	.....	.....
Wood and steel power lines built and acquired by the Commission	9,505.09	256.68	17.25	9,541,654	160,216	37,277
Dominion Power and Transmission system, acquired by the Commission.....	884.85	.....	.....	822,863	.....	.....
Telephone lines built and acquired by the Commission and erected on wood-pole lines carrying power conductors.....	4,494.00	98.10	4.00	1,076,962	20,462	836
High-voltage telephone lines, Niagara system, 220,000 volts.....	421.00	.....	.....	81,833	.....	.....
High-voltage telephone lines, Northern system, 132,000 volts.....	.....	381.52	.....	.....	85,693	.....
High-voltage telephone lines, Niagara system.....	3,608.80	173.00	.....	1,084,836	18,250	.....
High-voltage telephone lines, Eastern Ontario system.....	227.86	.....	.....	79,358	.....	.....
High-voltage telephone lines, Thunder Bay system.....	201.10	.....	.....	71,770	.....	.....
High-voltage telephone lines, Georgian Bay system.....	111.66	.....	.....	43,394	.....	.....
Totals.....	27,252.11	2,654.79	21.25	39,231,684	6,727,790	38,113

NOTE.—This table does not include lines operated at less than 6,600 volts.



## NIAGARA SYSTEM—

## TOTAL MILEAGE OF HIGH-VOLTAGE LINES

Type of construction	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931
220,000-volt, steel-supported transmission lines.....	406.13	197.43	603.56

## SIZE, MATERIAL, LENGTH AND

Size and material	Wire miles of conductors		
	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931
795,000 c.m., a.c.s-r.....	1,218.39	592.29	1,810.68

## NORTHERN ONTARIO SYSTEM—SUDBURY DISTRICT—

## TOTAL MILEAGE OF HIGH-VOLTAGE LINES

Type of construction	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931
132,000-volt, steel-supported transmission lines.....		189.00	189.00

## SIZE, MATERIAL, LENGTH AND

Size and material	Wire miles of conductors		
	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931
336,400 c.m., a.c.s-r.....		1,134.00	1,134.00

NOTE.—a.c.s-r=Aluminum conductor, steel-reinforced; weights include steel core.

**220,000-VOLT TRANSMISSION LINES****TOTAL NUMBER OF STEEL TOWERS**

Type	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931
220,000-volt towers.....	2,022	981	3,003

**WEIGHT OF POWER CONDUCTORS**

Weight in pounds			Miles of single-circuit lines		
Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Completed to Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Completed to Oct. 31, 1931
6,587,834	3,202,512	9,790,346	406.13	197.43	603.56

**132,000-VOLT TRANSMISSION LINES****TOTAL NUMBER OF STEEL TOWERS**

Type	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931
132,000-volt towers.....		983	983

**WEIGHT OF POWER CONDUCTORS**

Weight in pounds			Miles of double-circuit lines		
Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Completed to Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Completed to Oct. 31, 1931
.....	3,161,592	3,161,592	.....	189.00	189.00

## EASTERN ONTARIO SYSTEM—

## TOTAL MILEAGE OF HIGH VOLTAGE LINES

Type of construction	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931
110,000-volt, steel-supported transmission lines. ....	52.93	.....	52.93
110,000-volt, wood-supported transmission lines. ....	61.58	.....	61.58
Totals. ....	114.51	.....	114.51

## SIZE, MATERIAL, LENGTH AND

Size and material	Wire miles of conductors			Weight in pounds		
	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931
477,000 c.m., a.c.s-r. ....	278.43	.....	278.43	1,277,201	.....	1,277,201
211,600 c.m., a.c.s-r. (4/0) ....	72.99	.....	72.99	113,572	.....	113,572
Totals. ....	351.42	.....	351.42	1,390,773	.....	1,390,773

NOTE— a.c.s-r=Aluminum conductor, steel-reinforced; weights include steel core.



HIGH-VOLTAGE TRANSMISSION LINES

TOTAL NUMBER OF STEEL TOWERS AND WOOD POLES

Type	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931
110,000-volt steel towers.....	294	.....	294
110,000-volt wood poles.....	842	.....	842
Totals.....	1,136	.....	1,136

WEIGHT OF POWER CONDUCTORS

Miles of single-circuit lines			Miles of double-circuit lines			Total miles single- and double-circuit lines Oct. 31, 1931
Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931	
87.55 24.33	.....	87.55 24.33	2.63 .....	.....	2.63 .....	90.18 24.33
111.88	.....	111.88	2.63	.....	2.63	114.51

## NIAGARA SYSTEM—

## TOTAL MILEAGE OF HIGH-VOLTAGE LINES

Type of construction	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931
110,000-volt, steel-supported transmission lines. . . . .	728.71	3.20	731.91
110,000-volt, wood-supported transmission lines. . . . .	68.75	.....	68.75
90,000-volt, steel-supported transmission lines. . . . .	65.72	.....	65.72
60,000-volt, steel-supported transmission lines. . . . .	54.07	.....	54.07
60,000-volt, wood-supported transmission lines. . . . .	17.12	.....	17.12
46,000-volt, steel-supported transmission lines. . . . .	16.94	.....	16.94
46,000-volt, wood-supported transmission lines. . . . .	21.54	.....	21.54
12,000-volt, wood-supported transmission lines. . . . .	5.93	.....	5.93
Totals. . . . .	978.78	3.20	981.98

## SIZE, MATERIAL, LENGTH AND

Size and material	Wire miles of conductor			Weight in pounds		
	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Under construction Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Under construction Oct. 31, 1931
167,800 c.m., a.c.s-r. . . . .	198.00	.....	.....	242,946	.....	.....
266,800 c.m., a.c.s-r. . . . .	308.43	.....	.....	558,566	.....	.....
312,000 c.m., a.c.s-r. . . . .	598.62	.....	.....	1,547,432	.....	.....
336,400 c.m., a.c.s-r. . . . .	571.14	.....	.....	1,592,338	.....	.....
477,000 c.m., a.c.s-r. . . . .	48.06	.....	.....	162,202	.....	.....
500,000 c.m., a.c.s-r. . . . .	246.30	.....	.....	1,010,322	.....	.....
605,000 c.m., a.c.s-r. . . . .	1,186.38	19.20	.....	4,885,511	79,065	.....
115,000 c.m., copper. . . . .	22.47	.....	.....	41,996	.....	.....
133,079 c.m., copper. . . . .	3.18	.....	.....	6,871	.....	.....
167,800 c.m., copper. . . . .	616.86	.....	.....	1,679,709	.....	.....
190,000 c.m., copper. . . . .	769.08	.....	.....	2,436,445	.....	.....
211,600 c.m., copper. . . . .	515.76	.....	.....	1,770,602	.....	.....
115,000 c.m., aluminum. . . . .	0.57	.....	.....	327	.....	.....
211,600 c.m., aluminum. . . . .	34.20	.....	.....	35,910	.....	.....
345,000 c.m., aluminum. . . . .	79.50	.....	.....	130,141	.....	.....
500,000 c.m., aluminum. . . . .	6.60	.....	.....	16,434	.....	.....
820,000 c.m., aluminum. . . . .	36.06	.....	.....	108,180	.....	.....
5/16" galv. steel. . . . .	64.62	.....	.....	71,598	.....	.....
Totals. . . . .	5,305.83	19.20	.....	16,297,530	79,065	.....

NOTE—a.c.s-r=Aluminum conductors, steel-reinforced. Weights include steel core.

HIGH-VOLTAGE TRANSMISSION LINES

TOTAL NUMBER OF STEEL TOWERS AND WOOD POLES

Type	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931
110,000-volt, steel towers.....	6,186	25	6,211
110,000-volt, wood poles.....	855	.....	855
90,000-volt, steel towers.....	747	.....	747
60,000-volt, steel towers.....	769	.....	769
60,000-volt, wood poles.....	506	.....	506
46,000-volt, steel poles.....	376	.....	376
46,000-volt, wood poles.....	672	.....	672
12,000-volt, wood poles.....	333	.....	333
Totals.....	10,444	25	10,469

WEIGHT OF POWER CONDUCTORS

Miles of single-circuit lines				Miles of double-circuit lines				Miles of four-circuit lines				Total miles one-, two- and four-circuit lines
Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Under construction Oct. 31, 1931		Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Under construction Oct. 31, 1931		Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Under construction Oct. 31, 1931		Completed to Oct. 31, 1931
66.00	.....	.....		.....	.....	.....		.....	.....	.....		66.00
38.31	.....	.....		32.25	.....	.....		.....	.....	.....		70.56
23.90	.....	.....		87.82	.....	.....		.....	.....	.....		111.72
.....	.....	.....		95.19	.....	.....		.....	.....	.....		95.19
15.60	.....	.....		0.21	.....	.....		.....	.....	.....		15.81
0.62	.....	.....		40.74	.....	.....		.....	.....	.....		41.36
1.21	.....	.....		192.11	3.20	.....		2.52	.....	.....		199.04
7.49	.....	.....		.....	.....	.....		.....	.....	.....		7.49
.....	.....	.....		0.53	.....	.....		.....	.....	.....		0.53
.....	.....	.....		102.81	.....	.....		.....	.....	.....		102.81
5.26	.....	.....		125.55	.....	.....		.....	.....	.....		130.81
.....	.....	.....		0.53	.....	.....		15.88	.....	.....		16.41
0.19	.....	.....		.....	.....	.....		.....	.....	.....		0.19
.....	.....	.....		5.70	.....	.....		.....	.....	.....		5.70
.....	.....	.....		13.25	.....	.....		.....	.....	.....		13.25
.....	.....	.....		1.10	.....	.....		.....	.....	.....		1.10
12.02	.....	.....		.....	.....	.....		.....	.....	.....		12.02
21.54	.....	.....		.....	.....	.....		.....	.....	.....		21.54
192.14	.....	.....		679.79	3.20	.....		18.40	.....	.....		911.53



### THUNDER BAY SYSTEM— MILEAGE OF HIGH-VOLTAGE LINES

Type of construction	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931
110,000-volt, steel-supported transmission lines.....	82.12	.....	82.12
110,000-volt, wood-supported transmission lines.....	82.75	.....	82.75
12,000-volt, wood-supported transmission lines.....	1.45	.....	1.45
Totals.....	166.32	.....	166.32

### SIZE, MATERIAL, LENGTH AND

Size and material	Wire miles of conductors			Weight in pounds		
	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931
336,400 c.m., a.c.s-r.....	278.22	.....	278.22	775,677	.....	775,677
4/0 a.c.s-r (211,000 c.m.).....	233.67	.....	233.67	363,590	.....	363,590
4/0 copper (211,000 c.m.).....	218.40	.....	218.40	749,767	.....	749,767
2/0 copper (133,079 c.m.).....	15.15	.....	15.15	32,739	.....	32,739
Totals.....	745.44	.....	745.44	1,921,773	.....	1,921,773

### GEORGIAN BAY SYSTEM— MILEAGE OF HIGH-VOLTAGE LINES

Type of construction	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931
110,000-volt, wood-supported transmission lines	55.83	.....	55.83
Totals.....	55.83	.....	55.83

### SIZE, MATERIAL, LENGTH AND

Size and material	Wire miles of conductor		
	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total completed to Oct. 31, 1931
3/0 a.c.s-r. (167,800 c.m.).....	167.49	.....	167.49
336,400 c.m., a.c.s-r.....	9.18	.....	9.18
Totals.....	176.67	.....	176.67

NOTE—a.c.s-r.—Aluminum conductor, steel-reinforced.

HIGH-VOLTAGE TRANSMISSION LINES

TOTAL NUMBER OF STEEL TOWERS AND WOOD POLES

Type	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931
110,000-volt steel towers.....	539	.....	539
110,000-volt wood poles.....	1,342	.....	1,342
12,000-volt wood poles.....	59	.....	59
Totals.....	1,940	.....	1,940

WEIGHT OF POWER CONDUCTORS

Miles of single-circuit conductors			Miles of double-circuit conductors			Total miles single- and double-circuit conductors
Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931	Completed to Oct. 31, 1931
83.65	.....	83.65	4.43	.....	4.43	88.08
77.89	.....	77.89	.....	.....	.....	77.89
72.80	.....	72.80	.....	.....	.....	72.80
5.05	.....	5.05	.....	.....	.....	5.05
239.39	.....	239.39	4.43	.....	4.43	243.82

HIGH-VOLTAGE TRANSMISSION LINES

TOTAL NUMBER OF WOOD POLES

Type	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931
110,000-volt wood poles.....	548	.....	548
Totals.....	548	.....	548

WEIGHT OF POWER CONDUCTORS

Weight in pounds			Miles of single-circuit lines			Total miles single-circuit lines
Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total completed to Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total completed to Oct. 31, 1931	Completed to Oct. 31, 1931
205,510	.....	205,510	55.83	.....	55.83	55.83
25,594	.....	25,594	3.06	.....	3.06	3.06
231,104	.....	231,104	58.89	.....	58.89	58.89

Weights include steel core.

# NIAGARA SYSTEM—WOOD-POLE TELEPHONE LINES

## SIZE, MATERIAL, LENGTH AND

	Wire miles of conductors		Weight in pounds		Miles of single-circuit lines	
Size and material	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931
No. 8 B. & S.G. copper....	32.18	.....	8,494	.....	16.09	.....
No. 9 B. & S.G. copper....	1,082.90	.....	226,326	.....	91.65	.....
No. 10 B. & S.G. copper....	1,124.68	.....	186,697	.....	207.88	.....
No. 11 B. & S.G. copper....	107.68	.....	17,013	.....	53.84	.....
No. 4 copper-clad steel....	12.00	.....	7,440	.....	.....	.....
No. 8 copper-clad steel....	188.28	.....	46,128	.....	1.94	.....
No. 14 copper-clad steel....	7.68	.....	468	.....	.....	.....
No. 17 copper-clad steel....	10.88	.....	326	.....	5.44	.....
No. 19 p-i. l-c. cable.....	819.20	173.00	112,082	18,250	.....	.....
No. 22 p-i. l-c. cable.....	34.00	.....	296,208	.....	.....	.....
No. 12 B.W.G. galv. iron....	11.40	.....	1,881	.....	5.70	.....
No. 12 weather-proof iron...	2.84	.....	886	.....	1.42	.....
6 x .0661 steel, 1 x .0661 alum.	132.00	.....	77,748	.....	66.00	.....
No. 9 galv. iron.....	43.08	.....	13,139	.....	.....	.....
Totals.....	3,608.80	173.00	1,084,836	18,250	449.96	.....

NOTE—B. & S.G.—Browne & Sharpe gauge.



FOR HIGH-VOLTAGE TRANSMISSION LINES

WEIGHT OF CONDUCTORS (Excluding 220,000-volt lines)

Miles of double-circuit lines		Miles of 4-circuit lines		Miles of paper-insulated lead-covered copper cable		Total mileage 1-, 2-, 4-, and mis- cellaneous circuits completed to Oct. 31, 1931
Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	
212.80		6.05				16.09
177.23						310.50
						385.11
						53.84
3.00						3.00
42.36		1.37				45.67
1.92						1.92
						5.44
				11.16	3.46	14.62
				0.34		0.34
						5.70
						1.42
						66.00
21.54						21.54
458.85		7.42		11.50	3.46	931.19

NOTE—B.W.G.=Birmingham wire gauge.  
p-i. l-c. cable=Paper-insulated lead-covered cable.

**THUNDER BAY SYSTEM—WOOD-POLE TELEPHONE**  
**SIZE, MATERIAL, LENGTH AND**

Size and material	Wire miles of conductor			Weight in pounds		
	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931
3 x 12 galv. steel . . . . .	13.24	.....	13.24	6,554	.....	6,554
3 x 13 galv. steel . . . . .	161.04	.....	161.04	60,390	.....	60,390
No. 6 a.c.s-r . . . . .	18.32	.....	18.32	3,517	.....	3,517
No. 10 copper-clad steel . . . . .	8.50	.....	8.50	1,309	.....	1,309
Totals . . . . .	201.10	.....	201.10	71,770	.....	71,770

NOTE—a.c.s-r. = Aluminum conductor, steel-reinforced. Weights include steel core.

# LINE FOR HIGH-VOLTAGE TRANSMISSION LINES

## WEIGHT OF CONDUCTORS

Miles of single-circuit lines		Total mileage completed to Oct. 31, 1931
Completed to Oct. 31, 1930	Completed Oct 31, 1930 to Oct. 31, 1931	
6.62	.....	6.62
80.52	.....	80.52
9.16	.....	9.16
4.25	.....	4.25
100.55	.....	100.55

# WOOD AND STEEL-POLE TRANSMISSION AND TELEPHONE LINES

(Excluding High-Voltage Lines)

## TOTAL MILEAGE OF LINES AND NUMBER OF POLES

Lines	Miles completed		
	To Oct. 31, 1930	Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931
Low-tension lines completed.....	2,518.39	84.39	2,602.78
Low-tension lines under construction.....	.....	3.75	3.75
Single-circuit lines completed.....	1,968.54	1.17	1,969.71
Double-circuit lines completed.....	525.79	83.22	609.01
Three-circuit lines completed.....	23.73	.....	23.73
Five-circuit lines completed.....	0.33	.....	0.33
Single-circuit telephone lines completed.....	2,205.75	49.05	2,254.80
Double-circuit telephone lines completed.....	137.36	.....	137.36
Three-circuit telephone lines completed.....	7.54	.....	7.54
STEEL AND WOOD POLES			
Number of poles erected.....	103,329	2,718	106,047
Number of steel poles erected.....	16	.....	16
Number of poles under construction.....	.....	.....	.....



# NIAGARA SYSTEM—TELEPHONE LINES

## SIZE, MATERIAL, LENGTH AND

Size and material	Wire miles of conductors			Weight in pounds		
	Completed to Oct. 31, 1930	Completed Oct. 31, 1930, to Oct. 31, 1931	Completed to Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930, to Oct. 31, 1931	Completed to Oct. 31, 1931
No. 6 a.c. s-r. ....	362.14	.....	362.14	69,531	.....	69,531
No. 9 copper. ....	58.86	.....	58.86	12,302	.....	12,302
Totals. ....	421.00	.....	421.00	81,833	.....	81,833

# EASTERN ONTARIO SYSTEM—

## SIZE, MATERIAL, LENGTH AND

Size and material	Wire miles of conductors			Weight in pounds		
	Completed to Oct. 31, 1930	Completed Oct. 31, 1930, to Oct. 31, 1931	Total to Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930, to Oct. 31, 1931	Total to Oct. 31, 1931
3 x .0661 aluminum.... } 4 x .0661 steel. .... }	128.62	.....	128.62	40,258	.....	40,258
1 x .0661 aluminum.... } 6 x .0661 steel. .... }	99.24	.....	99.24	39,100	.....	39,100
Totals. ....	227.86	.....	227.86	79,358	.....	79,358

# GEORGIAN BAY SYSTEM—TELEPHONE LINE

## SIZE, MATERIAL, LENGTH AND

Size and material	Wire miles of conductors			Weight in pounds		
	Completed to Oct. 31, 1930	Completed Oct. 31, 1930, to Oct. 31, 1931	Total to Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930, to Oct. 31, 1931	Total to Oct. 31, 1931
1 x .0661 aluminum.... } 6 x .0661 steel. .... }	111.66	.....	111.66	43,394	.....	43,394
Totals. ....	111.66	.....	111.66	43,394	.....	43,394

NOTE—a.c.s-r. = Aluminum conductor, steel-reinforced. Weights include steel core.

FOR 220,000-VOLT LINES

WEIGHT OF CONDUCTORS

Miles of single-circuit lines		Total mileage of single-circuit lines completed to Oct. 31, 1931
Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	
181.07	.....	181.07
29.43	.....	29.43
210.50	.....	210.50

HIGH-VOLTAGE TELEPHONE LINES

WEIGHT OF CONDUCTORS

Miles of single-circuit lines		Total mileage of single-circuit lines completed to Oct. 31, 1931
Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	
64.31	.....	64.31
49.62	.....	49.62
113.93	.....	113.93

FOR HIGH-VOLTAGE TRANSMISSION LINES

WEIGHT OF CONDUCTORS

Miles of single-circuit lines		Total to Oct. 31, 1931
Completed to Oct. 31, 1930	Completed Oct. 31, 1930, to Oct. 31, 1931	
55.83	.....	55.83
55.83	.....	55.83

## WOOD AND STEEL-POLE

## SUMMARY—

## GAUGE, LENGTH AND

Size and material	Wire miles of conductors			Weight in pounds			
	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Under construction Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Under construction Oct. 31, 1931	
1,035,500 c.m. aluminum.....	1.68			8,610			
500,000 c.m. aluminum.....	78.66			195,863			
345,000 c.m. aluminum.....	215.19			352,266			
336,400 c.m. aluminum.....	7.26			12,109			
300,000 c.m. aluminum.....	42.30			63,027			
173,000 c.m. aluminum.....	37.29			32,293			
4/0 aluminum (211,600 c.m.).....	771.27			813,130			
3/0 aluminum (167,800 c.m.).....	1,989.18			1,658,974			
2/0 aluminum (133,079 c.m.).....	183.60			122,093			
1/0 aluminum (105,534 c.m.).....	726.78			381,558			
No. 2 aluminum (66,373 c.m.).....	342.63			113,067			
477,000 c.m. a.c.s-r.....	103.80			350,325			
605,000 c.m. a.c.s-r.....	2.10			8,377			
336,400 c.m. a.c.s-r.....	176.80			465,035			
125,000 c.m. a.c.s-r.....	233.34			214,672			
4/0 a.c.s-r (211,600 c.m.).....	433.50	14.31		674,523	22,266		
3/0 a.c.s-r (167,800 c.m.).....	238.47			292,601			
2/0 a.c.s-r (133,079 c.m.).....	87.84			85,819			
1/0 a.c.s-r (105,534 c.m.).....	805.77	76.80		628,997	59,596		
No. 2 a.c.s-r (66,373 c.m.).....	1,249.08	124.02		625,725	60,521		
No. 4 a.c.s-r (41,742 c.m.).....	57.00	38.79		17,442	11,869		
190,000 c.m. copper.....	131.52			416,655			
173,000 c.m. copper.....	3.75			10,552			
115,000 c.m. copper.....	73.95			138,212			
4/0 copper (211,600 c.m.).....	16.56			56,783			
3/0 copper (167,800 c.m.).....	3.36			9,149			
2/0 copper (133,079 c.m.).....	233.73	2.76	17.25	505,090	5,964	37,277	
1/0 copper (105,534 c.m.).....	218.64			373,873			
No. 1 copper (83,694 c.m.).....	9.00			12,258			
No. 2 copper (66,373 c.m.).....	63.69			68,720			
No. 3 copper (52,634 c.m.).....	18.42			15,749			
No. 4 copper (41,742 c.m.).....	147.87			99,452			
No. 6 copper (26,250 c.m.).....	104.34			44,344			
3 x 12 galv. steel (35,643 c.m.).....	36.39			18,013			
1/4" galv. steel (48,223 c.m.).....	52.50			34,649			
9/32" galv. steel (62,200 c.m.).....	85.05			71,782			
7/16" galv. steel (153,200 c.m.).....	32.10			70,331			
5/16" galv. steel (83,200 c.m.).....	360.30			399,211			
6 galv. iron (41,000 c.m.).....	130.38			80,325			
Totals.....	9,505.09	256.68	17.25	9,541,654	160,216	37,277	

NOTE.—a.c.s-r = Aluminum cable, steel-reinforced. Weights include steel core.



TRANSMISSION LINES

(Excluding High-Voltage Lines)

WEIGHT OF CONDUCTORS

Miles of single-circuit lines			Miles of double-circuit lines			Miles of three-circuit lines			Total circuit miles of one, two-, three-, circuit lines completed to Oct. 31, 1931
Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Under construction Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Under construction Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Under construction Oct. 31, 1931	
0.56									0.56
2.50			11.86						14.36
1.51			35.11						36.62
			1.21						1.21
						4.70			4.70
1.51			5.46						6.97
183.89			36.60						220.49
250.94			206.06						457.00
32.68			14.26						46.94
166.64			37.81						204.45
106.91			3.65						110.56
34.60									34.60
0.70									0.70
51.96			1.82						53.78
77.78									77.78
120.16	4.77		12.17						137.10
57.19			11.15						68.34
33.18			0.81						33.99
265.93	24.18		1.03	0.71					291.85
370.05	41.34		21.94			0.81			434.14
19.00	12.93								31.93
19.82			12.01						31.83
1.25									1.25
17.39			3.63						21.02
0.88			2.32						3.20
			0.56						0.56
		1.75	21.37	0.46	2.00				21.83
51.08			10.90						61.98
3.00									3.00
21.23									21.23
4.80			0.67						5.47
20.25			14.52						34.77
33.78			0.50						34.28
12.13									12.13
17.50									17.50
28.35									28.35
			5.35						5.35
26.82			25.10						51.92
43.46									43.46
2,079.43	83.22	1.75	497.87	1.17	2.00	5.51			2,667.20

This sheet is based on route and wire miles.

**TELEPHONE**

**ERECTED ON WOOD-POLE LINES**

**GAUGE, LENGTH AND WEIGHT OF ALUMINUM,**

Size and material	Wire miles of conductors				Weight in	
	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Under construction Oct. 31, 1931	Completed to Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931
No. 9 B. & S.G. Copper.....	398.00	97.18	4.00	495.18	83,182	20,310
No. 10 B. & S.G. Copper.....	189.04	0.92	.....	189.96	31,381	152
No. 8 B. & S.G. c-c steel.....	117.26	.....	.....	117.26	28,729	.....
No. 10 B. & S.G. c-c steel.....	938.04	.....	.....	938.04	144,458	.....
No. 17 B. & S.G. c-c steel.....	8.12	.....	.....	8.12	244	.....
No. 6 B.W.G. galv. iron.....	15.20	.....	.....	15.20	8,710	.....
No. 8 B.W.G. galv. iron.....	1.42	.....	.....	1.42	537	.....
No. 9 B.W.G. galv. iron.....	1,696.32	.....	.....	1,696.32	517,268	.....
No. 10 B.W.G. galv. iron.....	73.08	.....	.....	73.08	18,270	.....
No. 12 B.W.G. galv. iron.....	111.54	.....	.....	111.54	18,404	.....
No. 6 a.c.s.r.....	748.54	.....	.....	748.54	143,719	.....
3 x .0661 alum. and 4 x 0661 steel.....	43.60	.....	.....	43.60	13,646	.....
3 x 12 galv. steel.....	88.88	.....	.....	88.88	43,729	.....
3 x 13 galv. steel.....	64.96	.....	.....	64.96	24,685	.....
Totals.....	4,494.00	98.10	4.00	4,592.10	1,076,962	20,462

NOTE.—For telephone lines generally on wood poles and serving 220,000-volt and 110,000-volt power lines, see separate table.

c-c steel = Copper-clad steel. a.c.s.r = Aluminum cable, steel-reinforced.

## LINES

## CARRYING POWER CONDUCTORS

## COPPER-CLAD STEEL AND GALVANIZED IRON WIRE

pounds		Miles of single-circuit lines			Miles of double-circuit lines			Single and double-circuit lines completed to Oct. 31, 1931
Under construction Oct. 31, 1931	Completed to Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Under construction Oct. 31, 1931	Completed to Oct. 31, 1930	Completed Oct. 31, 1930 to Oct. 31, 1931	Under construction Oct. 31, 1931	
836	103,492	187.74	48.59	2.00	.....	.....	.....	236.33
.....	31,533	94.52	0.46	.....	.....	.....	.....	94.98
.....	28,729	1.94	.....	.....	15.00	.....	.....	16.94
.....	144,458	469.02	.....	.....	.....	.....	.....	469.02
.....	244	4.06	.....	.....	.....	.....	.....	4.06
.....	8,710	7.60	.....	.....	.....	.....	.....	7.60
.....	537	0.71	.....	.....	.....	.....	.....	0.71
.....	517,268	847.98	.....	.....	.....	.....	.....	847.98
.....	18,270	36.54	.....	.....	.....	.....	.....	36.54
.....	18,404	55.77	.....	.....	.....	.....	.....	55.77
.....	143,719	277.63	.....	.....	48.32	.....	.....	325.95
.....	13,646	21.80	.....	.....	.....	.....	.....	21.80
.....	43,729	44.44	.....	.....	.....	.....	.....	44.44
.....	24,685	32.48	.....	.....	.....	.....	.....	32.48
836	1,097,424	2,082.23	49.05	2.00	63.32	.....	.....	2,194.60

B. &amp; S.G. = Browne &amp; Sharpe Gauge.

B.W.G. = Birmingham wire gauge.



DOMINION POWER AND TRANSMISSION SYSTEM  
MILEAGE OF LINES

Type of construction	Total to Oct. 31, 1931
44,000-volt, steel-supported transmission lines.....	37.37
44,000-volt, wood-supported transmission lines.....	153.85
22,000-volt, wood-supported transmission lines.....	28.23
22,000-volt, concrete pole-supported transmission lines.....	10.55
11,500-volt, wood-supported transmission lines.....	7.33
10,000-volt, wood-supported transmission lines.....	6.76
Totals.....	244.09

SIZE, MATERIAL, LENGTH AND

Size and material	Wire miles of conductors	
	Total to Oct. 31, 1931	
605,000 c.m., a.c.s-r.....	3.93	
465,000 c.m. aluminum.....	58.50	
157,500 c.m. copper.....	372.84	
198,600 c.m. copper.....	10.98	
133,079 c.m., copper (2/0).....	93.66	
105,534 c.m., copper (1/0).....	9.33	
66,373 c.m., copper (2).....	222.33	
52,634 c.m., copper (3).....	32.41	
41,742 c.m., copper (4).....	40.59	
26,250 c.m., copper (6).....	20.28	
Totals.....	884.85	

NORTHERN ONTARIO SYSTEM—  
WOOD-POLE TELEPHONE LINE  
SIZE, MATERIAL, LENGTH AND

Size and material	Wire miles of conductors	
	Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931
6 x .0661 steel.....	60.00	60.00
1 x .0661 alum.....		
6 x .0661 alum.....	321.52	321.52
1 x .0661 steel.....		
Totals.....	381.52	381.52

WEIGHT OF POWER CONDUCTORS

Weight in pounds	Miles of single-circuit conductors	Miles of double-circuit conductors	Total miles single- and double-circuit conductors
Total to Oct. 31, 1931	Total to Oct. 31, 1931	Total to Oct. 31, 1931	
16,184	1.31	.....	1.31
131,040	19.50	.....	19.50
139,815	55.82	34.23	90.05
6,555	.....	1.83	1.83
198,840	31.22	.....	31.22
15,702	3.11	.....	3.11
235,225	49.71	12.20	61.91
43,972	12.27	2.60	14.87
27,033	13.53	.....	13.53
8,497	6.76	.....	6.76
822,863	193.23	50.86	244.09

SUDBURY DISTRICT  
FOR HIGH VOLTAGE TRANSMISSION LINES  
WEIGHT OF CONDUCTORS

Weight in pounds		Miles of single- circuit lines	Total mileage of single-circuit lines completed to Oct. 31, 1931
Completed Oct. 31, 1930 to Oct. 31, 1931	Total to Oct. 31, 1931	Completed Oct. 31, 1930 to Oct. 31, 1931	
23,640	23,640	30.00	30.00
62,053	62,053	160.76	160.76
85,693	85,693	190.76	190.76

## APPENDIX III

### DISTRIBUTION LINES AND SYSTEMS

#### Summaries of Data respecting Rural Distribution Systems, Distribution Feeders, Metering Stations, Distributing Stations and Distributing Systems constructed by the Hydro-Electric Power Commission.

Below is shown in tabular and descriptive form the work carried on under the supervision of the Distribution section of the Electrical Engineering department during the year ended October 31, 1931.

This work includes the construction of rural distribution systems, the installation of feeders to supply urban municipalities and the construction of metering equipments.

Work in connection with distribution systems was done by the Commission for certain municipalities, private companies, etc., at the request and at the expense of the parties concerned.

#### SUMMARY OF CONSTRUCTION IN RURAL POWER DISTRICTS

System	At October 31, 1930		At October 31, 1931	
	Miles of primary line constructed	Number of consumers receiving service	Miles of primary line constructed	Number of consumers receiving service
Niagara system.....	5,196.7	34,723	6,094.8	40,394
Georgian Bay system—				
Severn district.....	177.8	1,471	244.3	2,023
Eugenia district.....	62.5	320	160.4	862
Wasdells district.....	171.9	1,002	210.3	1,238
Muskoka district.....	28.2	180	55.3	320
Bala district.....	15.4	99	31.2	183
Eastern Ontario system—				
Central Ontario district.....	592.0	4,009	813.7	5,437
St. Lawrence district.....	300.7	1,880	356.0	2,147
Rideau district.....	51.2	272	64.8	385
Madawaska district.....	9.1	8	9.3	53
Ottawa district.....	116.5	626	165.1	988
Northern Ontario system—				
Nipissing district.....	4.5	192	9.5	250
Totals.....	6,726.5	44,782	8,196.7	54,281



## DETAILS OF CONSTRUCTION IN RURAL POWER DISTRICTS

Rural power district	Property number	At October 31, 1930		At October 31, 1931	
		Miles of primary line constructed	Number of consumers receiving service	Miles of primary line constructed	Number of consumers receiving service

## NIAGARA SYSTEM

Acton.....	N5D1	3.0	7	7.7	25
Ailsa Craig.....	N4D7	0.6	2	6.0	18
Alvinston.....	N18D9	2.5	4	6.5	10
Amherstburg.....	N15D3	55.5	516	59.6	544
Aylmer.....	N11D2	96.3	521	97.1	561
Ayr.....	N12D4	20.3	66	22.7	82
Baden.....	N7D1	79.6	337	89.2	413
Beamsville.....	N1D4	129.0	829	135.9	916
Belle River.....	N15D2	43.4	327	43.4	358
Blenheim.....	N14D3	46.8	262	56.0	299
Bond Lake.....	N3D3	121.8	1,143	147.0	1,261
Bothwell.....	N14D10	30.8	110	35.5	125
Brampton.....	N13D2	48.2	192	51.6	185
Brant.....	N12D1	80.9	432	97.3	510
Brigden.....	N18D8	31.4	96	34.8	110
Burford.....	N12D2	34.5	180	47.7	257
Caledonia.....	N2D5	67.0	314	95.1	449
Chatham.....	N14D1	120.0	708	131.6	786
Chippawa.....	N1D7	12.2	119	20.6	127
Clinton.....	N8D11	50.0	287	65.6	359
Delaware.....	N4D3	116.3	591	120.8	634
Dorchester.....	N4D1	104.9	529	109.7	551
Dresden.....	N14D12	20.0	63	24.2	89
Drumbo.....	N12D5	40.5	215	52.0	247
Dundas.....	N2D1	85.8	595	92.3	642
Dunnville.....	N1D9	6.7	40	9.1	60
Dutton.....	N11D3	30.7	134	46.9	191
Elmira.....	N7D3	16.4	66	20.0	79
Elora.....	N5D4	25.0	158	40.6	273
Essex.....	N15D7	73.6	397	84.2	442
Exeter.....	N4D6	60.0	504	63.0	551
Forest.....	N18D6	22.8	70	38.6	134
Galt.....	N6D2	26.7	233	37.0	290
Georgetown.....	N5D2	38.2	186	49.1	239
Goderich.....	N8D2	22.0	100	36.5	172
Grantham.....	N1D2	47.5	473	51.1	502
Guelph.....	N5D3	81.4	460	87.1	537
Haldimand.....	N2D8	28.9	162	49.8	246
Harriston.....	N8D5	7.0	37	23.0	57
Harrow.....	N15D4	64.4	516	66.9	588
Ingersoll.....	N10D3	147.6	522	182.1	656
Jordan.....	N1D3	29.2	258	32.9	342
Keswick.....	N3D5	31.4	754	53.6	888
Kingsville.....	N15D5	114.3	1,217	127.2	1,305
Listowel.....	N8D8	41.6	216	49.2	555

## DETAILS OF CONSTRUCTION IN RURAL POWER DISTRICTS—Continued

Rural power district	Property number	At October 31, 1930		At October 31, 1931	
		Miles of primary line constructed	Number of consumers receiving service	Miles of primary line constructed	Number of consumers receiving service

## NIAGARA SYSTEM—Continued

London.....	N4D2	177.0	1,798	184.2	1,938
Lucan.....	N4D5	32.7	112	33.0	117
Lynden.....	N2D2	42.1	200	51.0	239
Markham.....	N3D1	88.9	632	102.2	746
Merlin.....	N14D15	50.4	181	77.9	289
Milton.....	N13D3	37.6	240	45.9	365
Milverton.....	N8D9	19.1	92	36.0	162
Mitchell.....	N8D7	52.5	292	64.3	344
Newmarket.....	N3D4	40.8	250	55.1	316
Niagara.....	N1D1	43.3	259	46.1	290
Norwich.....	N10D1	85.6	397	90.5	417
Oil Springs.....	N18D3	14.9	91	14.9	96
Palmerston.....	N8D6	23.8	69	32.9	101
Petrolia.....	N18D5	13.7	54	14.5	57
Preston.....	N6D1	124.9	842	139.0	926
Ridgetown.....	N14D2	93.2	634	104.1	677
St. Marys.....	N9D1	90.0	266	111.0	428
St. Jacobs.....	N7D2	54.9	298	65.7	367
St. Thomas.....	N11D1	132.0	977	154.1	1,072
Saltfleet.....	N17D1	81.0	952	84.2	1,033
Sandwich.....	N15D1	119.3	2,048	125.7	2,145
Sarnia.....	N18D4	83.0	1,033	87.5	1,137
Scarboro.....	N3D2	62.9	464	76.2	584
Seaforth.....	N8D10	7.3	124	11.3	134
Simcoe.....	N12D6	36.6	226	64.1	314
Stamford.....	N1D6	12.2	287	12.6	289
Stratford.....	N8D4	34.1	231	35.3	226
Strathroy.....	N4D4	62.2	169	78.3	238
Streetsville.....	N13D1	90.9	349	96.0	386
Tavistock.....	N8D1	68.5	269	79.5	317
Thamesville.....	N14D11	47.0	183	62.9	251
Tilbury.....	N14D14	33.9	147	50.1	251
Tillsonburg.....	N10D4	101.0	516	108.4	553
Wallaceburg.....	N14D13	74.5	421	83.2	537
Walsingham.....	N12D7	44.5	235	67.0	359
Walton.....	N8D3	28.4	173	53.4	229
Waterdown.....	N2D3	31.2	311	36.0	364
Waterford.....	N12D3	48.7	198	64.4	257
Watford.....	N18D7	17.0	49	17.6	57
Welland.....	N1D5	238.1	2,224	264.5	2,534
Woodbridge.....	N16D1	180.5	898	188.1	974
Woodstock.....	N10D2	119.8	584	127.3	614

## DETAILS OF CONSTRUCTION IN RURAL POWER DISTRICTS—Continued

Rural power district	Property number	At October 31, 1930		At October 31, 1931	
		Miles of primary line constructed	Number of consumers receiving service	Miles of primary line constructed	Number of consumers receiving service
GEORGIAN BAY SYSTEM					
SEVERN DISTRICT					
Alliston.....	S32D1	20.0	120	23.3	133
Barrie.....	S4D1	35.3	274	51.3	402
Beeton.....	S33D1	0.3	1	0.3	1
Bradford.....	S37D1	0.7	3	22.2	72
Buckskin.....	S24D1	0.9	15	0.9	15
Cookstown.....	S35D1	.....	.....	0.5	2
Creemore.....	S10D2	8.8	0	19.3	64
Elmvale.....	S7D1	23.3	107	25.5	151
Hawkestone.....	S9D1	21.9	104	26.0	110
Innisfil.....	S31D1	26.0	262	27.7	355
Medonte.....	S18D1	2.2	18	8.3	50
Midland.....	S1D1	9.7	34	10.1	39
Nottawasaga.....	S5D1	7.8	87	7.8	90
Thornton.....	S36D1	7.5	31	8.0	30
Wasaga Beach.....	S10D1	13.4	415	13.1	509
EUGENIA DISTRICT					
Arthur.....	E13D2	0.4	3	2.4	9
Bruce.....	E19D1	.....	.....	39.1	161
Chatsworth.....	E3D1	0.0	21	0.0	22
Flesherton.....	E1D1	1.6	32	1.6	32
Holstein.....	E7D1	0.0	1	0.5	6
Lucknow.....	E24D1	0.1	2	0.1	2
Markdale.....	E1D2	1.0	2	13.6	60
Meaford.....	E14D1	0.8	2	0.8	2
Neustadt.....	E8D1	0.3	1	0.5	4
Orangeville.....	E12D1	10.9	27	20.2	76
Owen Sound.....	E2D1	.....	.....	1.3	12
Ripley.....	E24D2	0.4	2	4.0	11
Shelburne.....	E10D1	2.4	11	6.9	26
Sauble.....	E46D1	.....	.....	10.0	60
Tara.....	E15D1	23.5	98	23.5	112
Wroxeter.....	E22D1	19.5	113	35.9	267
WASDELLS DISTRICT					
Beaverton.....	W2D1	2.8	21	6.1	34
Cannington No. 1.....	W3D1	3.8	24	4.0	24
Cannington No. 2.....	W3D2	4.7	22	5.6	22
Georgina.....	W2D2	10.0	85	15.5	107
Mariposa.....	W9D1	42.8	277	46.9	310
Port Perry.....	W12D1	42.6	260	48.5	314
Sparrow Lake.....	W1D1	18.6	144	27.4	203
Uxbridge.....	W11D1	46.6	169	60.3	224
MUSKOKA DISTRICT					
Beaumaris.....	M7D1	18.5	131	22.3	173
Huntsville.....	M2D1	.....	.....	15.0	63
Utterson.....	M8D1	9.7	49	18.0	84
BALA DISTRICT					
Bala.....	GB13D1	15.4	99	31.2	183

a 1.6 miles—5 consumers—Transferred from Walkerton Quarries R.P.D.



## DETAILS OF CONSTRUCTION IN RURAL POWER DISTRICTS—Continued

Rural power district	Property number	At October 31, 1930		At October 31, 1931	
		Miles of primary line constructed	Number of consumers receiving service	Miles of primary line constructed	Number of consumers receiving service
EASTERN ONTARIO SYSTEM					
CENTRAL ONTARIO DISTRICT					
Belleville.....	C38D1	63.1	531	80.7	626
Bowmanville.....	C23D1	16.7	26	28.7	117
Brighton.....	C6D1	5.5	30	9.2	42
Campbellford.....	C11D1	17.5	60	22.0	84
Cobourg.....	C13D1	62.0	275	67.4	307
Colborne.....	C7D1	21.5	111	23.4	130
Fenelon Falls.....	C30D1			18.5	113
Kingston.....	C44D1	58.7	301	91.3	563
Lakefield.....	C18D1	0.0	1	16.7	59
Lindsay.....	C29D1	0.6	2	4.9	23
Millbrook.....	C25D1	11.7	61	16.1	71
Napanee..... <sup>b</sup>	C43D1	47.5	128	79.6	403
Newcastle.....	C22D1	18.6	106	25.9	115
Norwood.....	C31D1	3.9	38	7.4	52
Oshawa.....	C24D1	60.6	743	86.0	826
Omeme.....	C26D1			3.0	2
Peterborough.....	C20D1	47.0	874	57.8	947
Pickering.....	C24D2	13.8	174	16.7	193
Port Hope.....	C16D1	16.7	88	19.3	97
Stirling.....	C35D1	26.7	100	26.7	105
Trenton.....	C3D1	39.7	171	41.4	193
Warkworth.....	C49D1	0.4	3	0.4	6
Wellington.....	C45D1	59.5	185	88.6	363
ST. LAWRENCE DISTRICT					
Alexandria.....	L15D1	8.1	48	16.9	78
Brockville.....	L3D1	69.3	468	87.6	598
Chesterville.....	L5D1	46.5	368	46.5	318
Iroquois.....	L9D1	80.0	391	80.5	397
Martintown.....	L13D1	16.3	112	20.0	147
Maxville.....	L14D2	40.3	269	58.3	349
Prescott.....	L2D1	29.5	164	34.8	205
Williamsburg.....	L7D1	10.7	60	11.4	55
RIDEAU DISTRICT					
Perth.....	H2D1			8.6	38
Smiths Falls.....	H3D1	48.7	272	51.3	314
Kemptville.....	H9D1	2.5	0	4.9	33
MADAWASKA DISTRICT					
Arnprior.....	QM10D1	3.6	0	4.2	44
Renfrew.....	QM16D1	5.5	8	5.1	9
OTTAWA DISTRICT					
Nepean.....	T1D1	116.5	626	165.1	988

<sup>b</sup> .03 miles and 1 consumer—Transferred from Deseronto R.P.D.

## NORTHERN ONTARIO SYSTEM

<b>NIPISSING DISTRICT</b>					
North Bay.....	Z4D1	4.5	192	8.5	250
Powassan.....	Z8D1			1.0	

**DISTRIBUTION FEEDER CONSTRUCTION**

During the year ending October 31, 1931 the following work was carried on in connection with distribution feeders.

**N 246 x 15—Decewsville Distributing Station to Cayuga**

Three-fourths of a mile of line was purchased from Cayuga Hydro Electric System as of August 31, 1931.

**N 342 x 13—Bond Lake Distributing Station to Richmond Hill**

This line was transferred to Bond Lake Rural Power District as of July 1, 1931.

**N 342 x 14—Bond Lake Distributing Station to Aurora.**

Circuits and crossarms were rearranged and the line transferred to Bond Lake Rural Power District as of July 1, 1931.

**N 346 x 14—Newmarket Distributing Station to Aurora**

Circuits and crossarms were rearranged on three miles of this line and it was transferred to Newmarket R.P.D. as of July 1, 1931, the remainder of the line was dismantled.

**N 349 x 84—Keswick Distributing Station to Sedore Junction.****N 384 x 20—Sedore Junction to Sutton.**

These lines were transferred to Keswick R.P.D. as of July 1, 1931.

**N 443 x 14—Exeter Distributing Station to Hensall**

New conductors were strung, new crossarms erected and storm guying added to this line. The work was complete November 29, 1930.

**N 1135 x 6—West Lorne Distributing Station to Rodney.**

A new line was constructed and the existing circuits on the N 11 x 14—High Tension Telephone poles were removed. The line is 4.00 miles long and the work was completed September 30, 1931.

**N 1545 x 19—Leamington Distributing Station to Wheatley.**

The conductors on this line were changed. The work was completed April 10, 1931.

**H 12 x 1201—Forfar Distributing Station to Westport.**

A new 4,600-volt line is being constructed to supply the Village of Westport. The work was 90% complete at October 31, 1931.

**E 48 x 4832—Walkerton Rural Station to Otter Creek Station.**

Capital was set up in this line which was taken over from the Foshay interests.

**C 31 x 3103—Norwood Distributing Station to Hastings.**

A new 4,000/2,300-volt line was constructed to supply the Village of Hastings. The line is approximately 5 miles long and the work was completed May 24, 1931.

**C 70 x 7001—Napanee Rural Station to Bath.**

A new 4,600-volt line is being constructed to supply the Village of Bath. The line is approximately 12.5 miles long and was 75% complete at October 31, 1931.

**M 862 x 63—Rosseau Junction to Rosseau.**

A new 8,000/4,600-volt line was constructed to serve the village of Rosseau. The line is approximately 9.5 miles long and the work was completed August 6, 1931.

## STATIONS CONSTRUCTED

Station	Property number	Date work was completed	Transforming or measuring power for
<b>NIAGARA SYSTEM</b>			
Caledonia.....	N2D35	Nov. 1, 1931	Caledonia R.P.D. (Part).
Davis Leather.....	N347	July 15, 1931	Davis Leather Company.
Lambeth..... <i>a</i>	N433	Jan. 8, 1931	Lambeth.
Rodney.....	N1136	Sept. 31, 1931	Rodney.

## GEORGIAN BAY SYSTEM

<b>SEVERN DISTRICT</b>			
Alliston..... <i>b</i>	S32D31	Jan. 22, 1931	Alliston R.P.D.
Creemore.....	S1032	Oct. 21, 1931	Creemore.
<b>EUGENIA DISTRICT</b>			
Shelburne R.P.D.....	S10D31	Feb. 12, 1931	Shelburne R.P.D. (Part).
Orangeville..... <i>c</i>	E12D31	Nov. 27, 1930	Orangeville R.P.D.
<b>MUSKOKA DISTRICT</b>			
Huntsville.....	M2D31	July 25, 1931	Huntsville R.P.D. (Part).
Rosseau.....	M833	July 17, 1931	Rosseau.

## EASTERN ONTARIO SYSTEM

<b>CENTRAL ONTARIO DISTRICT</b>			
Bowmanville.....	C23D31	Mar. 26, 1931	Bowmanville R.P.D. (Part).
Cameron Rural.....	C2932	Jan. 2, 1931	Lindsay R.P.D. (Part).
Norwood.....	C31D31	June 28, 1931	Norwood R.P.D. (Part).
Hall Rural.....	C2933	June 19, 1931	Lindsay R.P.D. (Part).
<b>ST. LAWRENCE DISTRICT</b>			
Chesterville..... <i>d</i>	L5D31	April 16, 1931	Chesterville R.P.D. (Part).
Maxville.....	L14D32	Jan. 16, 1931	Maxville R.P.D. (Part).
<b>RIDEAU DISTRICT</b>			
Kemptville R.P.D.....	H9D31	Nov. 1, 1930	Kemptville R.P.D.

*a* Moved to new location.*b* Moved to new location and changed to 3-phase.*c* Changed from single to three-phase.*d* New AD ammeters installed.

The following work was done for Municipalities and outside parties:

Municipality or Party	Date work completed	Nature of work
Township of Medonte.....	June 25, 1931	Street lights—Hillsdale.
Township of Sandwich South.....	Mar. 14, 1931	Street lights—Roseland.
Township of Erin and East Garafraxa	Aug. 26, 1931	Street lights—Orton.
Lambeth.....	Jan. 8, 1931	Extend local system.
Creemore.....	Oct. 21, 1931	Recondition local system.
Port Elgin.....	Sept. 26, 1931	Reconstruction local system.
Warton.....	Sept. 19, 1931	Reconstruction local system.
Hastings.....	July 2, 1931	Reconstruction local system.
Rosseau.....	Aug. 5, 1931	Construction local system.
Port Carling.....	July 4, 1931	Extend local system.



APPENDIX IV

GENERATING STATIONS

Owned by the Co-operating Municipalities and Operated on  
Their Behalf by the Hydro-Electric Power Commission of Ontario

During the past few years the Commission has constructed several hydro-electric generating plants, has acquired others by purchase and has made additions and alterations to some of those earlier owned.

In the following tabulation, the generating stations are grouped under the systems to which they respectively belong, and particulars are given of the hydraulic features of the developments, the main turbines, the main generators, the excitors and the step-up transformers.

The present statement is published for purpose of permanent record. Usually there is relatively little change from year to year in the generating equipment listed. This Appendix if published again will only be after the lapse of such a period as would make further publication desirable.

Abbreviations

h.p.	.	.	.	.	.	.	.	.	.	horsepower
kw.	.	.	.	.	.	.	.	.	.	kilowatts
kv-a.	.	.	.	.	.	.	.	.	.	kilovolt-amperes
kv.	.	.	.	.	.	.	.	.	.	kilovolts
ft.	.	.	.	.	.	.	.	.	.	foot or feet

NIAGARA SYSTEM

GENERAL—This system comprises all the territory lying between Niagara Falls, Hamilton and Toronto on the east and Windsor, Sarnia and Goderich on the west and north served with electrical energy generated at plants on the Niagara river, and the Ottawa river at Chats falls and supplemented by purchased power transmitted from the Gatineau river.

TRANSMISSION LINES—220 kv. 603.6 miles; 110 kv. 800.7 miles; 90 kv. to 12 kv. 1,384.8 miles. Less than 12 kv. not included.

TRANSFORMATION—Total capacity in 155 stations owned by the Commission=step up 859,700 kv-a. in 5 stations; step down =1,087,370 kv-a. in 1-220 kv., 25-110 kv. transformer stations, 123 distributing stations, and 10,000 kv-a. in 1 auto transformer station.

GENERATION

Queenston Generating Station

Situated at Queenston on the Niagara river. Constructed by Commission. Official opening 28 December, 1921. Commercial operation 26 January, 1922. Intake at Chippawa, at mouth of Welland river (Grass Island Pool) above Niagara Falls. Water conveyed through canal 12¾ miles long, 4¼ miles of which from intake to Montrose consists of channel of Welland

river, widened and deepened, flow being reversed; remaining  $8\frac{1}{2}$  miles excavated concrete lined canal to forebay at Queenston, thence down the face of the cliff through penstocks provided with automatically operated Johnson valves, to the turbines. Net operating head 294 ft.

*Main Turbines*—Two 52,500 h.p. Wellman-Seaver-Morgan; three 55,000 h.p. William Cramp; five 58,000 h.p. Dominion Engineering Works. Total capacity 560,000 h.p.

*Auxiliary Turbines*—Two 2,800 h.p. Canadian Allis-Chalmers. Total capacity 5,600 h.p.

*Main Generators*—Three 45,000 kv-a., two 55,000 kv-a. Canadian Westinghouse Company, two 45,000 kv-a., three 54,000 kv-a. Canadian General Electric Company, 3-phase, 25 cycles, 12 kv. vertical shaft with thrust bearing. Total capacity 497,000 kv-a.

*Auxiliary Generators*—Two 2,200 kv-a. Canadian Westinghouse Company, 3-phase, 2,300 volts vertical shaft. Total capacity 4,400 kv-a.

*Exciters*—Five 150 kw.; five 180 kw. direct connected to main generators, two 30 kw. direct connected to auxiliary generators.

*Transformers*—Five banks = fifteen 15,000 kv-a., five banks = fifteen 18,333 kv-a. Canadian Westinghouse Company, single-phase, 12 to 63.5 kv. to operate 110 kv. star connected. Total capacity 500,000 kv-a.

### Ontario Power Generating Station

Situated in Queen Victoria Niagara Falls park below Horseshoe falls. Formerly property of Ontario Power Company. In operation July, 1905. Purchased by Commission August, 1917. Intake and headworks at first cascade of upper rapid, one mile above generating station. Water conveyed through three conduits of steel, concrete, and wood-stave respectively to distributors from which steel penstocks lead through rock cliff to turbines. Net operating head 180 ft.

*Main Turbines*—Seven 11,700 h.p., five 13,400 h.p. Voith, two 13,400 h.p. Wellman-Seaver-Morgan, one 20,000 h.p. S. Morgan Smith inward flow, horizontal, twin type. Total capacity 195,700 h.p.

*Auxiliary Turbines*—Two 1,600 h.p. Canadian Allis-Chalmers, two 500 h.p. Jenckes Machine Co. Total capacity 4,200 h.p.

*Main Generators*—Seven 8,776 kv-a., one 15,000 kv-a. Canadian General Electric Company, four 8,770 kv-a., three 7,500 kv-a. Westinghouse Electric & Manufacturing Company, 3-phase, 25 cycles, 12 kv. Total capacity 134,012 kv-a.

*Auxiliary Generators*—Two 375 kw. Westinghouse Electric and Manufacturing Company, two 1,060 kw. Allis-Chalmers Bullock. Total capacity 2,870 kw.

*Exciters*—Six 40 kw.; ten 60 kw.; three 125 kw. Canadian General Electric Company motor driven.

*Transformers*—Four banks = twelve 3,000 kv-a., 12 kv. to 60 kv.; Two banks = six 3,000 kv-a., 12 to 30 kv. single-phase Canadian Westinghouse Company. Total capacity 54,000 kv-a.

### Toronto Power Generating Station

Situated in Queen Victoria Niagara Falls park above the Horseshoe falls. Formerly owned by Toronto Power Company. In operation 1906-07. Purchased by Commission 1922. Water collected by wing dam conveyed to turbines from head works through steel penstocks. Tail race tunnelled through solid rock discharging under Niagara Falls. Net operating head 135 ft.

*Main Turbines*—Seven 15,500 h.p., four 13,000 h.p. William Cramp. Total capacity 160,500 h.p.

*Auxiliary Turbines*—Two 500 h.p. Morris vertical shaft. Total capacity, 1,000 h.p.

*Main Generators*—Two 8,000 kv-a., General Electric Company; two 8,000 kv-a.; seven 10,000 kv-a. Canadian General Electric Company, 3-phase, 25 cycles, 12 kv. vertical shaft. Total capacity 102,000 kv-a.

*Auxiliary Generators*—Three 300 kw. Canadian General Electric Company, 125 volts, two turbine driven and one motor driven.

*Exciters*—Eleven 50 kw., 125 volts direct connected to main generators.

*Transformers*—Three banks = nine 2,670 kv-a., two banks = six 6,000 kv-a. 12 to 60 kv. Canadian General Electric Company, single-phase. Total capacity 60,030 kv-a.

### Chats Falls Generating Station

Situated on the Ottawa river thirty miles upstream from the city of Ottawa. Plant controlled and owned jointly by the Hydro-Electric Power Commission of Ontario and the Ottawa Valley Power Company. First four units ready for operation October, 1931. Power house and intake integral with dam. Combined length of dam and power house approximately three miles. Power fed at generator voltage to adjacent outdoor transformer station, where it is stepped up to 220 kv. for transmission over the Commission's line to Toronto. Designed operating head 53 feet.

*Main Turbines*—Eight 28,000 h.p. Dominion Engineering Works, Limited, propeller type, vertical shaft. Total capacity 224,000 h.p.\* Plant designed for an ultimate installation of ten units.

*Main Generators*—Eight 23,500 kv-a. Canadian Westinghouse Company, 3-phase, 25 cycles, 13.2 kv. vertical shaft.\*

*Exciters*—Eight 200 kw., 250 volts, Canadian Westinghouse Company, direct connected to main generators.

*Transformers*—Four banks=twelve 15,700 kv-a. Canadian General Electric Company, 220 kv. to 13.2 kv., 25 cycles, single-phase. Total capacity 188,400 kv-a.

## DOMINION POWER AND TRANSMISSION SYSTEM

(In process of incorporation with the Niagara system)

*GENERAL*—This system comprises certain urban and rural districts in the vicinity of the cities of St. Catharines, Hamilton and Brantford formerly served by subsidiaries of the Dominion Power and Transmission Company. Properties including generating plants, transmission lines and substations were purchased in April, 1930. Power is obtained from an hydraulic development at Decew Falls and a steam plant at Hamilton. Twenty-five-cycle power is also purchased from Canadian Niagara Power Company and converted to 66.6 cycles at Niagara Falls.

*TRANSMISSION LINES*—Forty-four kv. 191.2 miles, 22 kv. to 10 kv. 52.9 miles. Less than 10 kv. not included.

*TRANSFORMATION*—Total capacity in 21 stations owned by the Commission=step-up 79,200 kv-a. in 3 stations; step-down 30,950 kv-a. in 18 transformer stations.

### GENERATION

#### Decew Falls Generating Station

Situated at Power Glen about two miles from St. Catharines. Formerly owned by Dominion Power and Transmission Company. In operation August, 1898. Purchased by the Commission in April 1930. Water supplied from Welland ship canal to forebay, thence through seven steel penstocks to turbines. Tail water passes by natural stream channel to Lake Ontario. Net operating head 260 ft.

*Main Turbines*—Six 7,000 h.p., one 3,500 h.p. Voith, two 3,000 h.p. Riva Monneret. Total capacity 51,500 h.p.

*Auxiliary Turbines*—Two 40 h.p., one 750 h.p. Total capacity 830 h.p.

*Main Generators*—One 2,500 kv-a., four 6,400 kv-a., Canadian Westinghouse Company, two 5,000 kv-a., Westinghouse Electric and Manufacturing Company, two 2,000 kv-a., Canadian General Electric Company, 3-phase, 66.6 cycles, 2,400 volts. Total capacity 42,600 kv-a.

*Auxiliary Generator*—One 500 kv-a. Canadian Westinghouse Company.

*Exciters*—One 100 kw. Canadian Westinghouse Company, three 100 kw. Westinghouse Electric and Manufacturing Company, motor driven, one 40 kw. Canadian General Electric Company belt-driven from main generator, two 30 kw. Royal Electric Company direct connected to auxiliary turbines, 70 volts.

*Transformers*—Two banks=six 2,000 kv-a. Canadian Westinghouse Company 2.4 to 24 kv., five 2,500 kv-a., four 3,200 kv-a. Westinghouse Electric and Manufacturing Company, one 2,500 kv-a., two 3,200 kv-a. Canadian Westinghouse Company, 66.6 cycles, 2.4 to 45 kv. Total capacity 46,200 kv-a.

#### Steam Plant at Hamilton

Situated on Burlington Bay at the north-eastern limits of the city of Hamilton. Formerly property of Dominion Power and Transmission Company. In operation 1916. Purchased by the Commission in April, 1930. Coal-fired boilers supply steam to direct connected turbo alternators.

*Main Steam Turbines*—Two 14,750 h.p. Westinghouse Machine Company. Total capacity 29,500 h.p.

*Auxiliary Steam Turbines*—One 75 kw. direct connected to exciter. Two pump units.

*Main Generators*—Two 12,500 kv-a. Westinghouse Electric and Manufacturing Company turbo alternators, 3-phase, 66.6 cycles, 6.6 kv. Total capacity 25,000 kv-a.

*Exciters*—One 75 kw. Westinghouse Electric and Manufacturing Company, steam turbine driven, two 75 kw. Canadian Westinghouse Company motor driven, 125 volts.

*Transformers*—Two banks=six 4,000 kv-a., 6.6 to 42 kv., single-phase Canadian Westinghouse Company. Total capacity 24,000 kv-a.

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\*In process of installation.



### Frequency Changer Station at Niagara Falls

Situated at Niagara Falls. In operation 1924. Purchased by the Commission in April, 1930. Power supplied to motor at 25 cycles.

*Motor*—One 8,200 kv-a., 3-phase, 25 cycles, 12 kv. Canadian Westinghouse Company.

*Generator*—One 9,000 kv-a., 3-phase, 66.6 cycles, 13.2 kv. Canadian Westinghouse Company.

*Exciter*—One 90 kw., 125 volts, direct connected.

*Transformers*—One bank=three 3,000 kv-a. Canadian Westinghouse Company single-phase, 13.2 to 48 kv. Total capacity 9,000 kv-a.

### GEORGIAN BAY SYSTEM

**GENERAL**—This system comprises the area adjoining on the north that section of country served by the Niagara System. It is a consolidation of what were formerly four systems known respectively as Severn, Eugenia, Wasdells and Muskoka, to which have been added properties and plants purchased from private interests and incorporated into the system as the Bruce and Bala districts. Power is obtained from developments on the Severn, Beaver, Muskoka and Saugeen rivers supplemented by purchased power from the Orillia Municipal plant. Additional power is provided from the Niagara System through frequency changers at Mount Forest and Hanover.

*Severn District* adjoins the Niagara System on the south and is the central portion of the system. Power developments in the district are on the Severn and Muskoka rivers.

*Eugenia District* also adjoins the Niagara System on the south and the Severn District on the east. Power developments are on the Saugeen and Beaver rivers.

*Wasdells District* is the south-eastern portion of the system with developments on the Severn river.

*Muskoka District* is the north-eastern portion of the system with developments on the Muskoka river.

*Bala District* serves a small section of territory situated geographically in the Muskoka District.

*Bruce District* is the north-western portion of the system with developments on the Saugeen river.

All districts are now interconnected by tie lines so that eleven generating stations operate in parallel through one network of transmission lines. The bulk of power is transmitted at 22 kv. but one tie line operates at 38 kv. with auto transformers at one end.

**TRANSMISSION LINES**—110 kv. 55.8 miles, 38 kv. 54.28 miles, 22 kv. and less 608.1 miles. Less than 6.6 kv. not included.

**TRANSFORMATION**—Total capacity in 75 stations owned by the Commission=step up 20,212 kv-a. in 7 stations; step down 26,170 kv-a. in 63 transformer stations, 10,500 kv-a. in 3 auto transformer stations, and 8,400 kv-a. in 2 frequency changer stations.

#### GENERATION

#### SEVERN DISTRICT

##### Big Chute Generating Station

Situated at Big Chute on the Severn river. Formerly the property of the Simcoe Railway and Power Company. In operation 1909. Purchased by the Commission in July, 1914. Water conveyed to forebay by canal and thence to power house by two steel penstocks. Average operating head 56 feet.

*Main Turbines*—Three 1,300 h.p. William Hamilton, one 2,300 h.p. Wellman-Seaver-Morgan horizontal shaft. Total capacity 6,200 h.p.

*Auxiliary Turbines*—Two 150 h.p. William Hamilton.

*Main Generators*—Three 900 kv-a. Canadian Westinghouse Company; one 1,600 kv-a. Canadian General Electric Company, 3-phase, 60 cycle, 2,200 volts, horizontal shaft. Total capacity, 4,300 kv-a.

*Exciters*—Two 100 kw. Canadian Westinghouse, 125 volts, turbine driven.

*Transformers*—Two banks=six 600 kv-a. Canadian Westinghouse Company, 2.2 to 22 kv. Total capacity 3,600 kv-a.

#### EUGENIA DISTRICT

##### Eugenia Falls Generating Station

Situated at Eugenia Falls on the Beaver river. Power rights purchased by Commission from Georgian Bay Power Company in 1914. Plant installed by Commission. In operation in November, 1915. Water is conveyed to plant through canal, two wood-stave pipe lines and two steel penstocks, each provided with surge tank. Average operating head 550 ft.

*Main Turbines*—One 4,000 h.p. Allis-Chalmers; two 2,250 h.p. Escher Wyss horizontal shaft. Total capacity 8,500 h.p.

*Main Generators*—One 2,820 kv-a.; two 1,410 kv-a. Canadian Westinghouse, 3-phase, 60 cycles, 4,000 volts. Total capacity 5,640 kv-a.

*Exciters*—One 40 kw.; two 30 kw. Canadian Westinghouse direct connected to generators.

*Transformers*—Two banks=six 900 kv-a. Canadian Westinghouse Company, 4 to 22 kv. Total capacity 5,400 kv-a.

#### **Hanover Generating Station**

Situated in the town of Hanover on Saugeen river. Formerly owned by Canada Cement Company. In operation about 1900. Purchased by Commission February, 1929. Water conveyed through canal to head works at power house. Operating head 17 to 18 ft.

*Main Turbines*—Two 175 h.p. William Hamilton. Total capacity 350 h.p.

*Main Generators*—Two 150 kv-a. Canadian General Electric Company, 3-phase, 60 cycles, 4,000 volts. Total capacity 300 kv-a.

*Exciter*—One 13 kw. Canadian General Electric Company, 125 volts.

#### **WASDELLS DISTRICT**

##### **Wasdells Falls Generating Station**

Situated at Wasdells Falls on the Severn river. Constructed by Commission. In operation October, 1914. Power house and intake integral with dam. Average operating head 12 ft.

*Main Turbines*—Two 600 h.p. Boving vertical shaft. Total capacity 1,200 h.p.

*Auxiliary Turbines*—One 55 h.p. Boving.

*Main Generators*—Two 400 kv-a. Swedish General Electric Company, 3-phase, 60 cycle, 2,300 volts vertical shaft. Total capacity 800 kv-a.

*Exciters*—One 20 kw. turbine driven, one 30 kw. motor driven Swedish General Electric Company, 125 volts.

*Transformers*—Two banks=six 150 kv-a., Canadian Westinghouse Company, single-phase, 2.3 to 22 kv. Total capacity 900 kv-a.

#### **MUSKOKA DISTRICT**

##### **South Falls Generating Station**

Situated at South Falls on Muskoka river. Purchased from the municipality of Gravenhurst on 1st November, 1915. Remodelled and enlarged in 1916 and again in 1924. Water conveyed from intake by three wood-stave pipe lines. Average operating head 107 ft.

*Main Turbines*—One 1,000 h.p. William Hamilton, two 2,200 h.p. William Kennedy horizontal shaft. Total capacity 5,400 h.p.

*Main Generators*—One 750 kv-a. Canadian General Electric Company, two 2,000-kva. Bruce Peebles, 3-phase, 60 cycles, 6,600 volts, horizontal shaft.

*Exciters*—Two 18 kw. Bruce Peebles, one 12 kw. Canadian General Electric Company direct connected to main generators, one 20 kw. Canadian General Electric Company motor-driven 125 volts.

*Transformers*—Two banks=six 1,200 kv-a.; 6.6 kv. to 38 kv., one bank=three 400 kv-a., 6.6 kv. to 22 kv. Canadian General Electric Company. Total capacity 8,400 kv-a.

##### **Hanna Chute Generating Station**

Situated at Hanna Chute on the Muskoka river about one-half mile up stream from South Falls plant and remote controlled from that point. Constructed by Commission. In operation October, 1926. Power fed at generator voltage to South Falls step-up transformers. Power house and intake integral with dam. Average operating head 30 ft.

*Main Turbines*—One 1,550 h.p. Dominion Engineering Works propeller type, vertical shaft.

*Main Generators*—One 1,400 kv-a., Swedish General Electric Company, 3 phase, 60 cycles, 6,600 volts with thrust bearing on vertical shaft.

*Exciters*—One 23 kw. direct connected to generator.

##### **Trethewey Falls Generating Station**

Situated at Trethewey Falls on Muskoka river about  $2\frac{1}{4}$  miles up stream from South Falls plant and remote controlled from that point. Constructed by Commission. In operation September, 1929. Power fed at generator voltage to South Falls step up transformers. Power house and intake integral with dam. Average operating head 35 ft.

*Main Turbines*—One 2,300 h.p. S. Morgan Smith-Inglis propeller type vertical shaft.

*Main Generators*—One 2,000 kv-a. Swedish General Electric Company, 3-phase, 60 cycles, 6,600 volts with spring-type thrust bearing on vertical shaft.

*Exciters*—One 24 kw. direct connected to generator.

BALA DISTRICT

**Bala Generating Station No. 1**

Situated in the town of Bala on Muskoka river. Formerly property of Bala Electric Light and Power Company. In operation 1917. Purchased by Commission in 1929. Water from Muskoka lake conveyed through canal to head works at power house. Operating head about 19 ft.

*Main Turbines*—Two 160 h.p. William Hamilton horizontal shaft. Total capacity 320 h.p.

*Main Generators*—One 125 kv-a., one 150 kv-a., Canadian General Electric, 3-phase, 60 cycles, 2,300 volts. Total capacity 275 kv-a.

*Exciters*—One 5 kw. Canadian General Electric Company, one 12.5 kw. Canadian Westinghouse Company, 125 volts, belt driven from main units.

**Bala Generating Station No. 2**

Situated in the town of Bala on Muskoka river a short distance from Bala station No. 1 and remote controlled from that point. Formerly property of Bala Electric Light and Power Company. In operation 1924. Purchased by Commission in 1929. Water from Muskoka lake conveyed to plant through short flume to head works at power house. Operating head about 19 ft.

*Main Turbine*—One 400 h.p. William Hamilton propeller-type vertical shaft.

*Main Generators*—One 312.5 kv-a. Canadian General Electric 3-phase, 60 cycles, 2,300 volts. Total capacity 312.5 kv-a.

*Exciter*—One 8 kw. Canadian General Electric, 125 volts, direct connected to main unit.

*Transformers*—One bank=three 50 kv-a. Canadian General Electric Company 2,300 to 13,200 volts; one bank=three 150 kv-a. Moloney Electric Company 2,300 to 6,600 volts, single-phase, 60 cycles. Total capacity 600 kv-a.

BRUCE DISTRICT

**Southampton Generating Station**

Situated at Indian rapids on Saugeen river about three miles above Southampton. Formerly owned by Foshay interests. In operation 1897. Purchased by Commission 1930. Power house and intake integral with dam. Operating head 11 ft.

*Main Turbines*—One 150 h.p. William Hamilton; one 300 h.p. William Kennedy. Total capacity 450 h.p.

*Main Generators*—One 188 kv-a. Swedish General Electric Company, 2,300 volts; one 200 kv-a. Canadian General Electric Company, 6,600 volts, 3-phase, 60 cycles. Total capacity 388 kv-a.

*Exciters*—One 9 kw., one 25 kw. Canadian General Electric Company, one 7½ kw. Canadian Westinghouse Company, 125 volts, belt driven from main units.

*Transformers*—Three 150 kv-a., 2,300 to 22,000 volts, Moloney Electric Company, single-phase, 60 cycles. Total capacity 450 kv-a.

**Walkerton Generating Station**

Situated on Saugeen river about two miles above the town of Walkerton. Formerly owned by Foshay interests. In operation 1894. Purchased by Commission 1930. Water conveyed through canal to head works at power house. Operating head about 12 ft.

*Main Turbines*—One 275 h.p. William Kennedy, one 300 h.p. Boving. Total capacity 575 h.p.

*Main Generators*—One 150 kv-a., one 200 kv-a. Swedish General Electric Company, 3-phase, 2,300 volts direct connected to turbines. Total capacity 350 kv-a.

*Exciters*—One 25 kw. Canadian Westinghouse Company motor driven, one 12 kw. turbine driven, one 20 kw. belt driven from main unit, Swedish General Electric Company, 125 volts.

*Transformers*—One 750 kv-a. Packard Electric Company, 3-phase, 2.3 kv. to 22 kv. Total capacity 750 kv-a.

**EASTERN ONTARIO SYSTEM**

**GENERAL**—This system comprises that portion of the province east of the areas served by the Georgian Bay and Niagara systems. It is a consolidation of what was formerly the Central Ontario and Trent system with the St. Lawrence, Rideau, Ottawa and Madawaska systems. Power is obtained from developments on the Trent, Madawaska and Mississippi rivers supplemented by purchased power from the St. Lawrence and Gatineau rivers. The Gatineau power is obtained on contract over a 110 kv. transmission line, owned by the Commission, which connects with the lines of the Gatineau Power Company at the inter-provincial boundary near the west city limits of Ottawa, and extends to step-down stations at Smiths Falls and Kingston from which it is distributed to the respective districts. The line is tapped near the south-west limits of the



city of Ottawa to connect with a step-down station which supplies its share of power to the municipality.

Complete interconnection and paralleling of the various generating stations does not normally obtain but interchange of power between different sections is possible.

The *Central Ontario District* is the most westerly district of the system. Power in this district is obtained from developments on the Trent river and its tributaries. The generators are connected through step-up transformers and thus operate in parallel through one network of transmission lines. Power is also purchased from the municipality of Campbellford and in emergencies from the Peterborough Hydraulic Power Company and the Canadian General Electric Company. Originally this area was served by subsidiary companies of the Electric Power Company but by agreement, 10th March, 1916, under the provisions of the Central Ontario Power Act of 1916 the Commission assumed control of the interests and properties of these companies. In addition to the generation and distributing systems these included two waterworks systems, three gas plants, and one pulp mill. The companies included in this agreement were:—Auburn Power Company, Limited; Central Ontario Power Company, Limited; City Gas Company of Oshawa, Limited; Cobourg Utilities Corporation Limited; Cobourg Gas, Light & Water Company; Eastern Power Company, Limited; Light, Heat & Power Company of Lindsay; Napanee Gas Company Limited; Napanee Water & Electric Company, Northumberland Pulp Company Limited; Peterborough Radial Railway Company; Port Hope Electric Light & Power Company; Seymour Power & Electric Company Limited; Sidney Electric Power Company Limited; Trenton Electric & Water Company Limited; Tweed Electric Light & Power Company Limited; Nipissing Power Company and North Bay Light, Heat & Power Company Limited; of these the last two are part of the Nipissing system.

The *St. Lawrence district* is the most easterly district of the system. There are no developments owned by the Commission in this district, power being purchased from the Cedar Rapids Transmission Company. It is delivered at 110 kv. to the Commission's transformer station at Cornwall where it is stepped down for transmission through the 44 kv. network to the various municipalities.

The *Rideau district* comprises the area between the Central Ontario and the St. Lawrence districts. Power developed in the district is obtained from developments on the Mississippi river. 1,050 h.p. is also purchased from the Rideau Power Company.

The *Ottawa district* comprises a section of the municipality of Ottawa and adjacent territory. Power first delivered by Commission in July, 1907, subsequent to purchase by municipality in 1905 from Consumers Electric Company of distributing system. Three-phase, 60-cycle power is purchased from Ottawa and Hull Power and Manufacturing Company at 11 kv. and delivered directly to the municipality.

The *Madawaska district* comprises municipalities in the lower Madawaska and Mississippi and neighbouring Ottawa river valleys. Original developments were made by M. J. O'Brien Company Limited and its subsidiary the Galetta Electric Power and Milling Company Limited. The interests and properties of this company were taken over by the Commission and operation assumed 31st May, 1929. Power is obtained from developments on the Madawaska and Mississippi Rivers, the transmission voltage on the former being 33 kv. and on the latter 11 kv. The two networks are tied together through transformers at Annprior transformer station.

TRANSMISSION LINES—110 kv. 114.5 miles; 44 kv. 629.6 miles; 33 kv. 70.3 miles; 26.4 kv. 76.96 miles.

TRANSFORMATION—Total capacity in 70 stations owned by the Commission=step up 58,930 kv-a. in 14 stations; step down 130,400 kv-a. in 5—110 kv. transformer stations and 51 distributing stations.

#### GENERATION

##### CENTRAL ONTARIO DISTRICT

##### Sidney Generating Station

Situated at Dam No. 2 on Trent river. Formerly property of Electric Power Company. In operation 1911. Commission assumed control 1916. Power house and intake integral with dam. Average operating head 18.5 ft.

*Main Turbines*—Four 1,400 h.p. Boving, vertical shaft. Total capacity 5,600 h.p.

*Auxiliary Turbines*—One 110 h.p. Boving, direct connected to exciter.

*Main Generators*—Four 937.5 Swedish General Electric Company, 3-phase, 60 cycles, 6,600 volts, direct connected to turbine. Total capacity 3,750 kv-a.

*Exciters*—One 75 kw. turbine driven, one 75 kw. motor driven Swedish General Electric Company 125 volts.

*Transformers*—Three banks=three 3,000 kv-a. Canadian Westinghouse Company, 3-phase, 6.6 to 44 kv. Total capacity 9,000 kv-a.

### Frankford Generating Station

Situated at Dam No. 5 on Trent river. Formerly property of Electric Power Company. In operation 1913. Commission assumed control 1916. Power house and intake integral with dam. Average operating head 17 ft.

*Main Turbines*—Four 1,200 h.p. Boving, vertical shaft. Total capacity 4,800 h.p.

*Auxiliary Turbines*—One 100 h.p. Boving, direct connected to exciter.

*Main Generators*—Four 812.5 kv-a. Swedish General Electric Company, 3-phase, 60-cycles, 6,600 volts, direct connected to turbine. Total capacity 3,250 kv-a.

*Exciters*—One 75 kw. turbine driven, one 75 kw. motor-driven, Swedish General Electric Company 125 volts.

*Transformers*—Power fed at generator voltage to step-up transformers at Sidney transformer station.

### Meyersburg Generating Station

Situated at Dam No. 8 on Trent river about 4 miles below Campbellford. Constructed by Commission. In operation October, 1924. Remote supervisory control from Ranney Falls plant about 3 miles up stream includes fifty-seven possible supervisory operations, and indications of operating conditions at plant. Power house and intake integral with dam. Average operating head 32 ft.

*Main Turbines*—Three 2,200 h.p. Allis-Chalmers, vertical shaft. Total capacity 6,600 h.p.

*Main Generators*—Three 2,000 kv-a. Swedish General Electric Company, 3-phase, 60 cycles, 6,600 volts, direct connected to turbine. Total capacity 6,000 kv-a.

*Exciters*—Three 31 kw. Swedish General Electric Company, 115 volts, direct connected to main generators.

*Transformers*—Three banks=three 2,000 kv-a. Packard Electric Company 3-phase, 6.6 to 44 kv. Total capacity 6,000 kv-a.

### Hague's Reach Generating Station

Situated at Dam No. 9 on Trent river about  $2\frac{1}{4}$  miles below Campbellford. Constructed by Commission. In operation March, 1925. Remote supervisory control from Ranney Falls plant with duplicate equipment to that at Meyersburg plant. Power house and intake integral with dam. Average operating head 22.5 ft.

*Main Turbines*—Three 1,600 h.p. Allis Chalmers propeller type, vertical shaft. Total capacity 4,800 h.p.

*Main Generators*—Three 1,400 kv-a. Canadian Westinghouse Company, 3-phase, 60 cycles, 6,600 volts, direct-connected to turbine. Total capacity, 4,200 kv-a.

*Exciters*—Three 30 kw. Swedish General Electric Company, 125 volts, direct connected to main generators.

*Transformers*—Three banks=three 1,350 kv-a. Moloney Electric Company, 3-phase, 6.6 to 44 kv. Total capacity 4,050 kv-a.

### Ranney Falls Generating Station

Situated at Dam No. 10 on Trent river about one mile below Campbellford. Constructed by Commission. In operation August, 1922. Power house and intake integral with dam. Average operating head 47 ft.

*Main Turbines*—Two 5,000 h.p. Boving, vertical shaft. Total capacity 10,000 h.p.

*Main Generators*—Two 4,500 kv-a. Canadian General Electric Company, 3-phase, 60 cycles, 6,600 volts, direct connected to turbine. Total capacity 9,000 kv-a.

*Exciters*—Three 50 kw. Canadian General Electric Company, 125 volt; two direct connected to main generators, one motor driven.

*Transformers*—Two banks=two 4,500 kv-a. Canadian General Electric Company, 3-phase, 6.6 to 44 kv. Total capacity 9,000 kv-a.

### Seymour Generating Station

Situated at Dam No. 11 on Trent river about  $1\frac{1}{2}$  miles up stream from Campbellford. Formerly property of Electric Power Company. In operation 1910. Commission assumed control 1916. Power house and intake integral with dam. Average operating head 23 ft.

*Main Turbines*—Five 1,100 h.p., Wm. Kennedy, vertical shaft. Total capacity, 5,500 h.p.

*Auxiliary Turbines*—One 110 h.p., Wm. Kennedy.

*Main Generators*—Five 750 kv-a. Canadian General Electric Company, 3-phase, 60 cycles, 2,400 volts, direct connected to turbines. Total capacity 3,750 kv-a.

*Exciters*—One 60 kw. turbine driven, one 75 kw. motor driven Canadian General Electric Company, 125 volts.

*Transformers*—Two banks=two 3,000 kv-a. Canadian Westinghouse Company, 3-phase, 2.4 to 44 kv. Total capacity 6,000 kv-a.



### Heely Falls Generating Station

Situated at Dam No. 14 on Trent river about 5 miles up stream from Campbellford. Formerly property of Electric Power Company. In operation 1913. Commission assumed control 1916. Water conveyed from head works through three steel penstocks to turbines. Average operating head 74 ft.

*Main Turbines*—Two 5,600 h.p., Escher Wyss, one 5,600 h.p., Wellman Seaver Morgan double-runner, horizontal shaft. Total capacity 16,800 h.p.

*Auxiliary Turbines*—One 300 h.p., Escher Wyss.

*Main Generators*—Two 3,750 kv-a. Canadian General Electric Company, one 3,750 kv-a. Swedish General Electric Company, 3-phase, 60 cycles, 6,600 volts, direct connected to turbines. Total capacity 11,250 kv-a.

*Exciters*—Two 160 kw. Canadian General Electric Company, 125 volts, one turbine and one motor driven.

*Transformers*—Three banks=three 3,750 kv-a. Canadian Westinghouse, 3-phase, 6.6 to 44 kv. Total capacity 11,250 kv-a.

### Auburn Generating Station

Situated at Dam No. 18 on Otonabee river near the city of Peterborough. Formerly property of Electric Power Company. In operation 1911. Commission assumed control 1916. Power house and intake integral with dam. Average operating head 18.5 ft.

*Main Turbines*—Three 960 h.p., Wm. Hamilton, horizontal shaft. Total capacity 2,880 h.p.

*Auxiliary Turbines*—One 135 h.p., Wm. Hamilton.

*Main Generators*—Three 625 kv-a. Canadian General Electric Company, 3-phase, 60 cycles, two 6,600 volts, one 2,400 volts, direct connected to turbines. Total capacity 1,875 kv-a.

*Exciters*—One 135 kw. turbine driven; one 90 kw. motor driven, Swedish General Electric Company, 125 volts.

*Transformers*—One bank=three 200 kv-a. Canadian General Electric Company, single-phase, 2.4 to 6.6 kv. Total capacity 600 kv-a. Fed at 6.6 kv. to Auburn transformer station where it is stepped up through two 1,875 kv-a. Canadian General Electric Company, 3-phase units 6.6 to 44 kv.

### Fenelon Falls Generating Station

Situated at Dam No. 30 on the Sturgeon river at Fenelon Falls. Formerly property of Electric Power Company. In operation 1899. Commission assumed control 1916. Power house and intake integral with dam. Average operating head 22.5 ft.

*Main Turbines*—Two 500 h.p. Samson, horizontal shaft. Total capacity 1,000 h.p.

*Main Generators*—Two 400 kv-a. Canadian General Electric Company, 3-phase, 60 cycles, 600 volts. Total capacity 800 kv-a.

*Exciters*—One 30 kw. Canadian General Electric Company, 125 volts, belt driven.

*Transformers*—Two banks=six 135 kv-a. Canadian General Electric Company, single-phase, air blast, 600 to 11,000 volts. Total capacity 800 kv-a.

### RIDEAU DISTRICT

#### High Falls Generating Station

Situated on the Mississippi river at High falls immediately above Dalhousie lake. Constructed by Commission. In operation May, 1920. Water conveyed from headworks through wood-stave pipe to turbines. Average operating head 78 ft.

*Main Turbines*—Three 1,240 h.p., Leffel, horizontal shaft. Total capacity 3,720 h.p.

*Main Generators*—Four 350 kv-a. two per turbine; one 875 kv-a. General Electric Company, 3-phase, 60 cycles, 4,400 volts, horizontal shaft, direct connected to turbines. Total capacity 2,275 kv-a.

*Exciters*—Three 25 kw., General Electric Company belt driven.

*Transformers*—Three banks=three 750 kv-a., Packard Electric Company, 3-phase, 4.16 to 25.4 kv. Total capacity 2,250 kv-a.

#### Carleton Place Generating Station

Situated on Mississippi river at Carleton Place. Formerly property of H. Brown & Sons. In operation 1910. Purchased by Commission May, 1919. Operation discontinued June, 1920. Renovated and held as standby since that date. Average operating head 10.5 ft.

*Main Turbines*—Three 283 h.p. Leffel, Samson vertical shaft. Total capacity 849 h.p.

*Main Generators*—One 150 kv-a., one 250 kv-a. Canadian General Electric Company, 3-phase, 60 cycles, 2,300 volts. Total capacity 400 kv-a.

*Exciters*—Two 7 kw. Canadian General Electric Company belt driven.

*Transformers*—Power fed at generator voltage to low-voltage bus in Carleton Place distributing station.



## MADAWASKA DISTRICT

**Calabogie Generating Station**

Situated on Madawaska river at lower end of Calabogie lake. Formerly property of M. J. O'Brien Limited. In operation 1917. Commission assumed control May, 1929. Power house and head works integral with dam. Average operating head 30 ft.

*Main Turbines*—Two 3,000 h.p. Allis Chalmers horizontal shaft. Total capacity 6,000 h.p.

*Auxiliary Turbines*—One 200 h.p. Allis Chalmers.

*Main Generators*—Two 2,000 kv-a. Allis Chalmers, 3-phase, 60 cycles, 6,600 volts, horizontal shaft. Total capacity 4,000 kv-a.

*Exciters*—Two 120 kw. Allis Chalmers 125 volt, one belted to main unit, one turbine driven.

*Transformers*—One bank=three 2,000 kv-a. Westinghouse Electric and Manufacturing Company, single-phase, 6.6 to 33 kv. Total capacity 6,000 kv-a.

**Galetta Generating Station**

Situated on Mississippi river at Hubbells falls about 4 miles from Arnprior. Formerly property of Galetta Power and Milling Company. In operation 1907. Commission assumed control May, 1929. Power house and head works integral with dam. Average operating head 22 ft.

*Main Turbines*—One 700 h.p. Wm. Kennedy, one 700 h.p. Boving. Horizontal shaft. Total capacity 1,400 h.p.

*Auxiliary Turbines*—Two 50 h.p. driving exciters.

*Main Generators*—Two 400 kv-a. Canadian Westinghouse Company, 3-phase, 60 cycles, 2,300 volts, horizontal shaft, direct connected to turbines. Total capacity 800 kv-a.

*Exciters*—Two 30 kw. Canadian Westinghouse Company, 125 volts, connected to auxiliary turbine.

*Transformers*—One bank=two 125 kv-a.; two 60 kv-a. Canadian Westinghouse Company, single-phase, 2.3 to 11 kv. Total capacity 370 kv-a.

**THUNDER BAY SYSTEM**

**GENERAL**—This system comprises that portion of the district of Thunder Bay adjacent to Lake Superior and includes the lake-head cities of Port Arthur and Fort William. Power is obtained from developments on the Nipigon river.

**TRANSMISSION LINES**—110 kv. 164.9 miles, 12 kv. 1.5 miles.

**TRANSFORMATION**—Total capacity in 4 stations=step-up 117,000 kv-a. in 2 stations; step-down 45,000 kv-a. in 2 stations.

**GENERATION****Cameron Falls Generating Station**

Situated at Cameron falls on the Nipigon river. Constructed by the Commission and first unit placed in operation in December, 1920. Power house and head works integral with dam. Water conveyed from head works to turbine through reinforced concrete intake pipes, three for each unit, approximately 50 ft. in length and 13 ft. by 10 ft. in cross-section. Normal operating head 72 ft.

*Main Turbines*—Two 12,500 h.p. I.P. Morris, two 12,500 h.p. Allis Chalmers, two 12,500 h.p. Canadian Vickers. Total capacity 75,000 h.p.

*Main Generators*—Two 10,600 kv-a. Canadian Westinghouse Company, four 10,600 kv-a. Canadian General Electric Company 3-phase, 60 cycles, 12,000 volts vertical shaft. Total capacity 63,600 kv-a.

*Exciters*—Six 125 kw. direct connected to main generators, one 125 kw. motor driven.

*Transformers*—Three banks=nine 8,000 kv-a. Canadian General Electric Company single-phase, 12 to 63.5 kv. to operate 110 kv. star connected. Total capacity 72,000 kv-a.

**Alexander Generating Station**

Situated on Nipigon river about 1½ miles below Cameron falls station and remote controlled from that point. Constructed by Commission and first unit in operation October, 1930. Water conveyed through short intake canal to headworks at power house. Head pond created by large earth dam, dykes and concrete sections. Normal operating head 60 ft.

*Main Turbines*—Three 18,000 h.p. S. Morgan Smith Inglis. Total capacity 54,000 h.p. Provision made for installation of a fourth unit.

*Main Generators*—Three 15,000 kv-a., Canadian General Electric Company, 3-phase, 60 cycles, 12,000 volts vertical shaft. Total capacity 45,000 kv-a.

*Exciters*—Three 165 kw. Canadian General Electric Company, 250 volts direct connected to main unit.

*Transformers*—Three banks=three 15,000 kv-a. Canadian General Electric Company three-phase, 12 to 110 kv. Total capacity 45,000 kv-a.

### NORTHERN ONTARIO SYSTEM

GENERAL—In this system are grouped three districts, viz., Nipissing, Sudbury and Patricia, at present independent, which serve portions of Northern Ontario.

The *Nipissing district* has been operated by the Commission for a number of years and includes municipalities lying immediately to the east of lake Nipissing. Power is obtained from developments on the South river. Power rights and plant formerly owned by Nipissing Power Company. Controlled by Electric Power Company Limited. Commission assumed control March, 1916, when the latter Company and all its subsidiaries were acquired by the Ontario Government.

The *Sudbury district* comprises portions of Algoma, Sudbury and Nipissing. Power is obtained from developments on the Wanapitei river. Power rights and plant formerly owned by the Wahnapiatae Power Company. Control assumed by Commission April, 1930. In addition 25-cycle power from the Ontario Power Service Corporation is purchased on contract and supplied to the International Nickel Company over a 132 kv. transmission line owned by the Commission.

The *Patricia district* was established to supply power to the Red Lake mining district. Power is obtained from a new development on the English river.

TRANSMISSION LINES—132 kv. 189.0 miles, 22 kv. 84.3 miles.

TRANSFORMATION—Total capacity in 11 stations owned by the Commission = step up 19,475 kv-a. in 7 stations; step down 7,400 kv-a. in 4 stations.

#### GENERATION

##### NIPISSING DISTRICT

###### Nipissing Generating Station

Situated on South river about  $1\frac{1}{2}$  miles from the village of Nipissing. Formerly the property of Nipissing Power Company. Control assumed by Commission March, 1916. Water conveyed to plant through canal, wood-stave pipe line, and steel penstock provided with surge tank. Average operating head 90 ft.

*Main Turbines*—Two 1,250 h.p. Jenckes Machine Company, horizontal shaft. Total capacity 2,500 h.p.

*Main Generators*—One 1,400 kv-a. Canadian Westinghouse Company; one 1,250 kv-a. Swedish General Electric Company, 3-phase, 2,300 volts. Total capacity 2,650 kv-a.

*Exciters*—One 17.5 kw. Swedish General Electric Company, 115 volts; one 21 kw. Canadian Westinghouse Company, 125 volts direct connected to main generators; one  $37\frac{1}{2}$  kw. motor driven.

*Transformers*—One bank = three 900 kv-a. Packard Electric Company, single-phase 2.3 to 22 kv. Total capacity 2,700 kv-a.

###### Bingham Chute Generating Station

Situated on South river about two miles from Powassan. Constructed by Commission. In operation December, 1923. Water conveyed to plant through wood-stave pipe line. Average operating head 47 ft.

*Main Turbines*—Two 650 h.p., Wm. Kennedy, horizontal shaft. Total capacity 1,300 h.p.

*Main Generators*—Two 450 kv-a. Canadian Westinghouse Company, 3-phase, 60 cycles, 2,200 volts.

*Exciters*—Two 12.5 kw., Canadian Westinghouse Company, direct connected to main generators.

*Transformers*—One bank = three 300 kv-a. Canadian Westinghouse Company single-phase, 2.2 to 22 kv. Total capacity 900 kv-a.

###### Elliott Chute Generating Station

Situated on South river approximately  $1\frac{1}{2}$  miles up stream from Bingham Chute plant. Constructed by Commission. In operation October, 1929. Semi-automatic. Remote controlled from Bingham Chute station. Water conveyed to plant through wood-stave pipe line. Average operating head 39 ft.

*Main Turbines*—One 1,800 h.p., S. Morgan Smith Inglis Company propeller type, vertical shaft.

*Main Generators*—One 1,800 kv-a. Swedish General Electric Company, 3-phase, 60 cycles, 2,300 volts, direct connected to turbine.

*Exciters*—One 22 kw. Swedish General Electric Company direct connected 125 volts.

*Transformers*—One bank = three 650 kv-a. English Electric Company, single-phase, 2.3 to 23 kv. Total capacity 1,950 kv-a.

## SUDBURY DISTRICT

**Coniston Generating Station**

Situated on Wanapitei river approximately 10 miles east of Sudbury. Formerly property of Wahnapiatae Power Company. In operation 1905. Commission assumed control April, 1930. Water conveyed through canal to headworks. Steel penstocks to turbines. Average operating head 53 ft.

*Main Turbines*—One 1,200 h.p., one 1,600 h.p. Jenckes, one 3,500 h.p. Allis Chalmers, horizontal shaft. Total capacity 6,300 h.p.

*Auxiliary Turbines*—One 35 h.p., one 70 h.p. Total capacity 105 h.p.

*Main Generators*—One 800 kv-a.; one 1,250 kv-a.; one 2,500 kv-a. Canadian General Electric Company, 3-phase, 60 cycle, 2,300 volts. Total capacity, 4,550 kv-a.

*Exciters*—One 25 kw., one 55 kw. turbine driven, one 100 kw. motor driven Canadian General Electric Company.

*Transformers*—Two banks=six 800 kv-a., Canadian General Electric Company, single-phase, water cooled, 2,300 to 23,000 volts. Total capacity 4,800 kv-a.

**McVittie Generating Station**

Situated on Wanapitei river approximately 26 miles from Sudbury. Formerly property of Wahnapiatae Power Company. In operation 1912. Commission assumed control April, 1930. Water conveyed through canal to headworks. Steel penstocks to turbines. Average operating head 54 ft.

*Main Turbines*—Two 1,800 h.p. Wm. Kennedy, horizontal shaft. Total capacity 3,600 h.p.

*Auxiliary Turbines*—One 75 h.p.

*Main Generators*—Two 1,250 kv-a. Canadian General Electric Company, 3-phase, 60 cycles, 2,300 volts. Total capacity 2,500 kv-a.

*Exciters*—Two 75 kw. Canadian General Electric Company, one direct connected to auxiliary turbine, one motor driven.

*Transformers*—One bank=three 625 kv-a. Canadian General Electric Company, single-phase, water cooled 2,300 to 23,000 volts. Total capacity 1,875 kv-a.

**Stinson Generating Station**

Situated on Wanapitei river approximately 8 miles up stream from Coniston Generating Station. Formerly property of Wahnapiatae Power Company. In operation 1925. Commission assumed control April, 1930. Water conveyed through canal to headworks. Steel penstocks to turbines. Average operating head 52.5 ft.

*Main Turbines*—Two 3,500 h.p. Allis Chalmers, horizontal shaft. Total capacity 7,000 h.p.

*Auxiliary Turbines*—One 150 h.p.

*Main Generators*—Two 2,500 kv-a. Canadian General Electric Company, 3-phase, 60 cycles, 2,300 volts. Total capacity 5,000 kv-a.

*Exciters*—One 100 kv-a. turbine driven, one 100 kv-a. motor driven Canadian General Electric Company 125 volts.

*Transformers*—One bank=three 1,667 kv-a. Canadian General Electric Company, single-phase, water cooled, 2,300 to 23,000 volts. Total capacity 5,000 kv-a.

## PATRICIA DISTRICT

**Ear Falls Generating Station**

Situated at Ear Falls on the English river. Constructed by Commission. In operation December, 1929. Water conveyed from Lac Seul conservation dam to power house through two wood-stave pipes. Normal operating head 36 ft.

*Main Turbines*—One 5,000 h.p. Dominion Engineering Works, vertical shaft.

*Main Generators*—One 5,000 kv-a. Canadian Westinghouse Company, 3-phase, 60 cycle, 6,600 volts, direct connected to turbine.

*Exciters*—One 65 kw. Canadian Westinghouse Company, 125 volt, direct connected.

*Transformers*—One bank=three 750 kv-a. 6.6 to 44 kv. single-phase, English Electric Company. Total capacity 2,250 kv-a.



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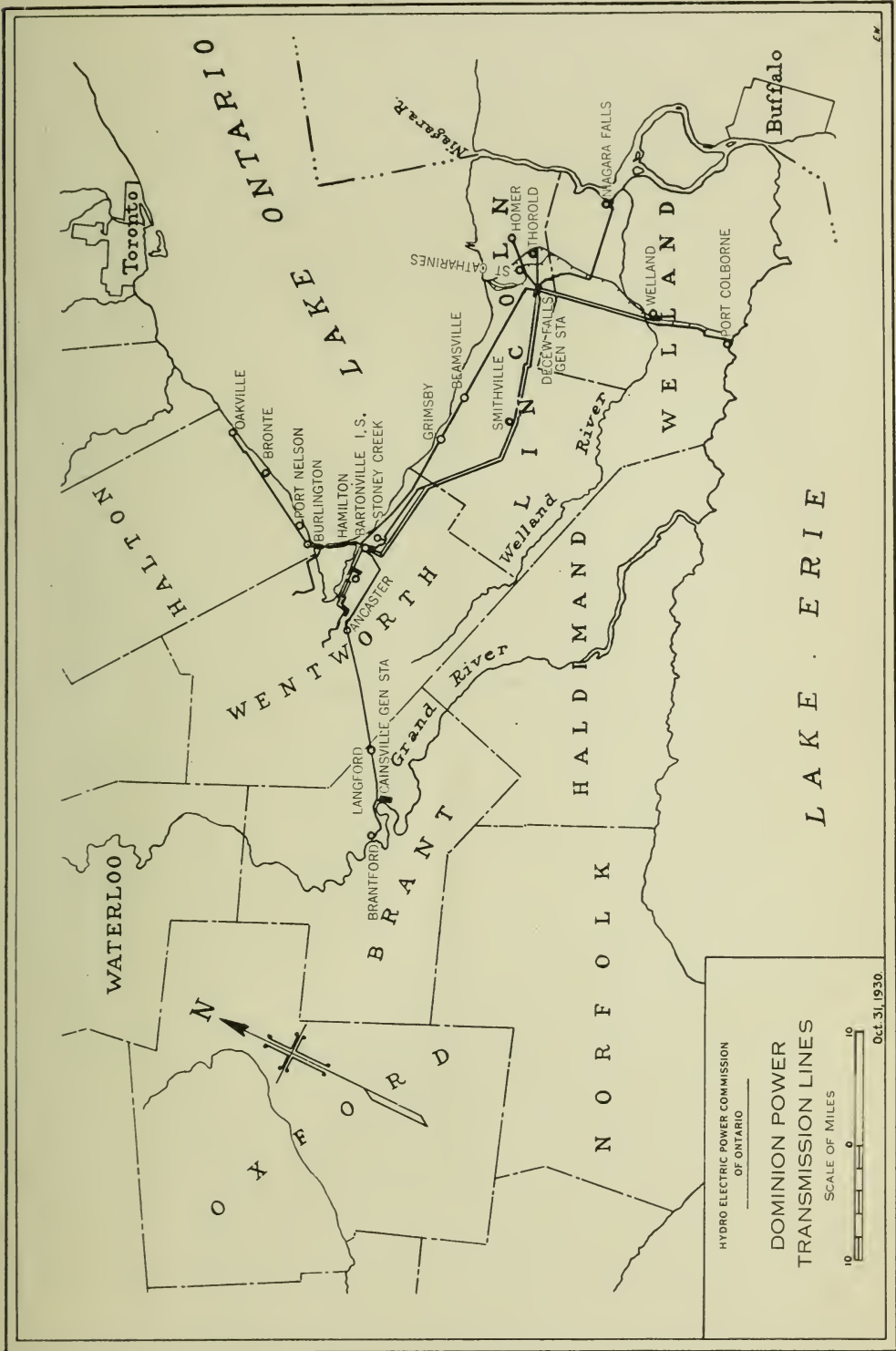
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PORTION OF  
NORTHWESTERN  
ONTARIO

Scale 100 miles = 1 inch

HYDRO-ELECTRIC POWER COMMISSION  
OF ONTARIO

MAP OF PORTION OF THE  
PROVINCE OF ONTARIO  
SHOWING  
TRANSMISSION LINES AND STATIONS

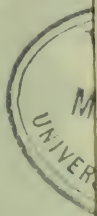
Scale: 15.78 miles = 1 inch

LEGEND

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- Low-Voltage Lines
- Distribution Lines
- Existing Hydro-Electric Generating Stations
- Proposed Hydro-Electric Generating Stations
- Other Plants Supplying Power to H.E.P.C.
- High-Voltage Stations
- Municipalities
- Distributing Stations
- Existing Regulating Dams
- Proposed Regulating Dams







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